AMERICAN BEE JOURNAL

The Oldest Bee Journal in the English Language

ESTABLISHED BY SAMUEL WAGNER IN 1861

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MONTH OF SEPTEMBER, 1938

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ALL our tin containers in the three smaller sizes are soldered with virgin tin. In this way no honey comes into contact with lead, as in ordinary solder. Prices subject to change.

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5 lb. pails, 50 in ctn., wt. 27 lbs.	3.20	3.25	3.25	3.25	3.25
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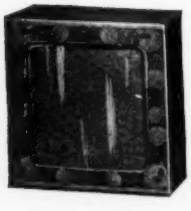
2 lb. jars, 12 in ctn., wt. 17 lbs.	.63	.65	.63	.65	.65
3 lb. jars, 12 in ctn., wt. 21 lbs.	.68	.70	.69	.70	.70

*Can only be shipped 16/c.



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American Bee Journal

Vol. LXXVIII—No. 9 Hamilton, Illinois, September, 1938 Monthly, $1.00 a year

Erratic Honeyflows

PROBABLY there is no more uncertainty concerning the extent of the yield of any agricultural crop than in the duration and extent of the honeyflow.

It is very baffling to watch a colony on scales and try to understand the reason for the variation from day to day. Here we have recently had a gain one day of fourteen pounds only to record only three pounds for two days immediately following. With no change in the hive population and little apparent difference in the weather, we assume that there must be important factors which we overlook.

Since little scientific investigation of the problem has been made, we are still in the dark as to the relative importance of the environmental factors which control nectar secretion. We would like to see an extended study of the honeyflow in several localities with careful record kept of every recognized influence such as air movement, temperature, humidity, rainfall and sunshine.

June brought an unusually heavy flow from yellow sweet clover in this midwestern area. A hive on scales gained an average of about seven pounds per day for a considerable period. During that time the gain from day to day varied from a pound or less up to fourteen. In spite of the wide variation from day to day the flow continued until even weak colonies were able to gather a substantial surplus. It is with flows like this that the strong colony is able to pile up the big crop. When a weak colony is able to get a super of honey, the strong one can harvest several hundred pounds.

—*ABJ*—

Honey and Health

THE newspapers have recently carried an extended account of the special health treatment of the vice chancellor of a famous university at Benares, India. The patient was Pundit Madan Mohan Malaviya, said to be one of the holiest and most revered men of India. At the age of 77 he was given a special rejuvenation treatment which consisted of living in the dark for forty days and drinking buffalo's milk with herbs and honey. The Doctor, Tapsi Baba, is reputed to be 172 years old and his patient declares that he seems to hold the real secret of youth.

Forty days in the dark would provide the patient a complete rest and this combined with a light diet of milk and honey might well account for the benefits of "improved eyesight, restored voice, improved complexion, erect walk and restored memory" without ascribing any special merit to the curative qualities of the honey.

As modern medicine seems to turn toward simple living as a means of health and as honey acquires a place in the diets of

Some years ago a self-styled hobo beekeeper of middle age came into our office on a cool April day with a copy of the Journal in his pocket. When asked how he came to town, he replied, "by freight." He had worked for numerous beekeepers from California to Minnesota and in Mississippi and Cuba, and had a wonderful fund of general beekeeping knowledge.

One of the things he brought out was that light color and mild flavor of honey depends much on latitude and altitude.

At the time of his visit he wanted a job with some northern beekeeper. He finally decided he had come north too early and would head back south. Since he looked rather gaunt, he was asked if he did not want a couple of dollars for food. He said he might take a dollar, but finally took two, and was then on his way down the railroad tracks to the south. Much to our surprise sixty days later came a letter with two dollars from far to the south.

Rebecca Sparks Peters, age eleven, brings out a general characteristic of beekeepers. One day she said, "Grandpa liked bees and made lots of money off'm honey. He was awful good t' grandma. She says you kin allus trust a beeman."

A. G. Woodman,
Michigan.

♦

I read with considerable interest the article entitled "The Catalpa Tree as a Two-fold Nectar Source" that appeared in the July, 1938 American Bee Journal. You might be interested in knowing that this year, for the first time, I observed bee working the extra floral nectaries of the catalpa at my home. Contrary to the observations in Europe, bees worked nectaries for a rather short time and then about a month after the blossoms had fallen. I would say that the bees worked the nectaries very little during the period when I was observing them.

E. Oertel,
Southern States Bee Culture
Field Laboratory,
Louisiana.

those who depend on nature to assist the physician, it is interesting to note that the Orientals, in many instances people of long and simple lives, have always maintained a high regard for honey.

—ABJ—

Fifty to One

NOT long since, the beekeepers began timidly to assert that the services of the bees in pollination were equal to the value of the honey secured. A little investigation indicated an even greater pollination value and soon we heard that service was worth twice the value of the honey.

Every year further study of the pollination problem has convinced scientific workers that the value of the service was underestimated. When we were told that the bees added ten times as much to the value of the crops in the fields they visited as the price of the honey they brought home it seemed a high figure.

Late estimates have raised the figure to a much higher point, one recent writer stating that the increase in yields of crops because of the bees is worth fifty times the value of the honey they store. The beekeepers will be satisfied with that figure. A fifty to one return is sufficient to insure a fair consideration of their interests by the public.

—ABJ—

Oldest Beekeepers Society

CONNFCTICUT beekeepers are preparing to celebrate the fiftieth anniversary of the organization of the Connecticut Beekeepers' Association in 1941. They claim that this is the oldest American beekeepers' society without change of name or break of continuity, having been organized on May 13, 1891.

This raises an interesting question and the American Bee Journal would like to know more about the early history of the various organizations of beemen. Of course there were numerous other associations of beekeepers in existence in 1891, but whether they have continued without interruption until now is the question.

The first bee meeting in this country of which this writer knows was held at Jackson, Michigan, in 1859. Perhaps Michigan beekeepers have a record which will show the date of the organization of their present society.

The National, now known as American Honey Producers' League, appears to be the natural successor of one formed in Cleveland, Ohio, in March, 1860. However, it has changed its name on numerous occasions and its constitution and manner of operation even more.

In some of the states, organizations of beemen have died and later been revived with new members and perhaps a new name. As an example, the present Iowa Beekeepers Association is only twenty-six years old and yet Iowa beekeepers had an organization at a much earlier time. There was a Western Illinois and Eastern Iowa Association which was very active as early as 1878. In this society was born the agitation for federal action which ultimately led to the passage of the pure food law.

Who can tell us about the organization of the first of our present day societies of beekeepers?

Clark W. Wilson, of Canastota, New York, sends us a clipping announcing the death of Harry White, veteran Oneida Lake beekeeper, and one of the few early residents of this section of New York.

Harry White had been a beekeeper at his Messinger's Bay farm for fifty-four years, having varying numbers of colonies from fifty to one hundred twenty on his farm. He was very active until the last few days of his life.

♦

The Klotz Cracker Company of New Orleans is using honey in a number of their products, particularly "Belle Meade," "Honey Moons," "Vanilla Pie," and "Sonny." Naturally, Louisiana honey producers are benefited. We hope that the products have a wide sale and that this outlet for Louisiana honey will prove to be a mutually profitable one. Anybody visiting the New Orleans territory should make a call on the Klotz Company.

♦

We welcome to the beekeeping publication field, the "Western Canada Beekeeper" which makes its appearance Vol. I, No. 1 with the July 1938 issue. A magazine of twenty pages (same dimensions as A. B. J.), it has for its managing editor, Frank H. Williams. There are articles in the first issue discussing the Manitoba cooperative plan, convention and association news, uses of honey, as well as editorials, disease and honey crop material and articles by contributors including a "Questions and Answers" page conducted by our old friend, L. T. Floyd, of the Manitoba department.

The crop news in itself should be sufficient to warrant the subscription to the magazine by the entire western Canadian field and the additional material, both of local and national interest should by all means be in the hands of all Canadian beekeepers.

We bespeak for the new publication a successful future in this young and growing honey producing region.

♦

A brochure, which is a reprint from an article in d'Arxius, Barcelona, Spain, has for its subject procedure for obtaining photographs of bees while pasturing upon the flowers.

The article is written by Miguel Navarra I Lizarbe, a beekeeper near Barcelona.

It was written in Spanish and undoubtedly would be of interest to our readers who are interested in both beekeeping and the Spanish language.

We assume that copies can be secured by writing directly to Barcelona.

Natural Pollen for Bees

FOR many years there has been endless discussion of ways and means of meeting the urgent need of bees for pollen when none is available in the field.

We are indebted to Dr. Norma Pfeiffer, of Boyce Thompson Institute for Plant Research, of Yonkers, New York, for several vials of pollen gathered last season and kept in storage at reduced pressure at refrigerator temperature.

It was interesting to note the behavior of the bees toward this unusual supply of natural pollen in early spring. When a warm day permitted the bees to fly they were eager for pollen after the long confinement. The presence of soy bean meal had established the habit of visiting special shelters so there was no delay in finding the pollen when it was exposed.

Each sample was placed in a separate pan and was at once covered with bees seeking food. Within fifteen minutes the quantity was greatly reduced and within half an hour all four pans had been cleaned of the available supply.

There is little question but that such a natural supply meets the requirements of the bees fully and if some way can be found to gather it abundantly and cheaply it will result in saving heavy losses to the industry in times of scarcity.

Four different kinds of pollen were used, one pan of corn, one of ragweed and the other two were from two species of lily. The corn and ragweed pollens were very dry while the lily pollens were moist. All were taken promptly but there was apparently more waste with the dry pollens because of the tendency to scatter with the movements of the insects. Pollen from lilies being moist appeared to be handled most readily.

It remains for someone to find ways and means of economical harvest of pollen on sufficient scale to meet the need.

—*ABJ*—

What is Civilization?

ONE cannot but wonder at the way in which so-called civilization distributes its benefits. We have the spectacle of a vast group paying nearly a million dollars to see a fight lasting two minutes while research which seeks to improve human living conditions is poorly supported. A big bruiser is paid more for sending his opponent to the hospital in a two minute fight than a productive worker can get for a lifetime of labor.

The big rewards do not go to the one who alleviates human misery by discovering a cure for a disease, or lightens labor, or makes living conditions more tolerable for the under privileged. They go to the fighters, the fan dancers and the entertainers.

The farmer who feeds the world is shown but little appreciation by his fellows who depend upon him for food, he finds his reward in the satisfaction of out-of-door living and an opportunity for service.

While passing through Chicago a few weeks ago, one of our staff had dinner at the Stevens Hotel. On the menu was a salad with "honey mayonnaise," which turned out to be made of fruit combined with a honey dressing, and was quite delicious. A restaurant of this quality, therefore, finds honey a good ingredient, and thinks it sufficiently important and attractive to mention it on their menu.

♦

In my opinion no sweet thing is necessary in the human diet. Refined sugar was not known three hundred years ago and previous to that time humans existed and grew to maturity with only the addition of honey to their diet.

Since eating certain things is a result of habit or accident or environment, the history of early eating might be a subject leading up to a consideration of the sugar consuming debauch which is now in its ascendancy. Manufacturers seem to be in a race to see who can put the most sugar in their products.

Thought seldom enters into the consideration of foods. Habit seems to be in control. The great expenditure of advertising shows that the food appeal is not to the intellect, but to the immaturity of the human mind.

We need a basis for grading honey to create confidence. No purchasing public will repond to the sloppy marketing and packing methods which beset our industry. Evidence of this is the widespread use of second hand tin. Some of the second hand tin. I really feel, is third or fifth hand.

I believe that our present grading rules are more or less of a joke. The water content of honey varies. The proposal to use bolting cloth strainers and grade according to a bolting cloth standard is not of much value because the weight of thread in the cloth is not mentioned and the cloth varies considerably. We could use a metal screen of monel like those used in other industries and so establish a screening standard and abolish the silly talk about "so many thicknesses of cheese cloth."

Forrest C. Mann,
Massachusetts.

♦

In the judgment notices of the Food and Drug Administration issued in August, No. 28062 concerns the adulteration and misbranding of honey packed and distributed by G. W. Bagwell of Chattanooga, Tennessee. This lot was represented to be honey, but consisted of a mixture of glucose and honey and was also short in weight. It was condemned and sold through charitable channels.

The Regular Channels of Trade

By Walter H. Hull,

Virginia.

OUR system of marketing through what are known as "the regular channels of trade" is by no means perfect. I have said some nice things about it, all of which are true. But there is another side to the picture—deliberate thievery on the part of sundry middlemen that makes you hot with disgust; rank injustice, for which no one seems to be responsible, that makes you sick with dismay. Yet with all the faults of the system and the abuses perpetrated in the name of Business, the fact remains that this is the best and most effective system we have so far been able to devise. A better one no doubt can be developed—may be, and probably is, in the making now, though still without form. But if it is better it will in due time replace the present system. No one need worry about that. It is as inevitable as that when a truck hits a flivver the flivver will be demolished and that when a locomotive hits a truck the truck will have to give way.

Nevertheless there is no denying that middlemen are expensive pets to maintain, even when docile and tractable. If you doubt that, go out and buy yourself a 16-ounce jar of honey. It will cost you probably around 25 cents. When you sold it you received seven, or six, or maybe as low as five cents for it. Now just why should the middleman receive from three to five times as much for merely selling your product as you can get for all the labor and skill and expense of producing it?

That isn't a strictly original question. Producers have been known to ask it before. In fact, if you have not asked it yourself at least a thousand times, you are a strange and rare specimen of producer.

Answers are equally numerous. However, the very recurrence of the question indicates a certain lack of finality in the answers, a vacuum somewhere in the tank of truth. Maybe we shall find it; who knows?

Let us suppose that you received five cents for that pound of honey that cost you 25 cents at the store. That is an increase of 500 per cent in price. We have a right to ask, How come?

Well, the container and its adjuncts in the form of labels and reshipping cases, with freight on the same, will account for five cents. In fact, it takes close figuring to hold it down to that point. That knocks off one hundred per cent from the five hundred. Freight on the honey might easily have cost 2½ cents per pound, so we lop off another 50 per cent from the original 500. Then we have labor, rent, interest, more freight, selling costs, delivery charges and so on, almost without end, it seems to the hurried operator.

These last mentioned costs vary so much with the circumstances and efficiency of the parties concerned that no definite figures can be given. However, 7½ cents per pound should ordinarily be enough to cover them. This takes another 150 per cent from the original 500, leaving 200 per cent, so if we split this in half for good measure we still have a clear profit of 100 per cent as the middleman's pay for merely selling the honey that you wrestled with myriad problems and difficulties to produce.

At first glance it looks like too much. Measured by all the tenets of reason and justice it still looks like too much. But before jumping into the selling arena with the idea of making a fortune quickly it would be well to take another and closer look. You will see at once that this "middleman" we have been talking about is not a single individual at all but rather a sort of composite creature, made up of retailer, wholesaler, jobber and, under certain conditions, the selling branch of your association. A 100 per cent profit spread over three or four points does not seem so exorbitant, although it is still serious enough. As a matter of fact, if it could be kept down to one hundred there would be less ground for complaint. Too often it is more.

But this answer to our question immediately raises another: Why should four middlemen be required—or three—or two, for that matter—merely to handle our product. The only excuse we can make for them is that they seem to do better for us when they hunt in two's and three's and four's than when they travel singly. It's the nature of the beast so to speak.

Some inquisitive person might be moved at this point to wonder why any middleman at all should be required, since they come so high. Here is one reason, from "The History of the Dividing Line," written by Wm. Byrd in 1728. This Col. Byrd was one of the commissioners appointed by Virginia and North Carolina to survey the line between those states. The surveyors, with some of the men, had plunged into the Great Dismal Swamp, the first white to venture across that amazingly tangled wilderness, while Byrd, with the rest of the party, went around to the other side to wait for them to emerge. This is what happened, in his own words: "... Though the men we had with us were kept in exact dicipline, and behaved without reproach, yet our landlord began to be tired of them, fearing they would breed a famine in his family. Indeed, so many keen stomachs made great havoc amongst the beef and bacon, which he had laid in for his summer provisions, nor could he easily purchase more at this time of year, with the money we paid him, because the people, having no certain market seldom provide any more of these commodities than will barely supply their own occasions."

The point is that having no markets the people raised no surplus. That made it easier for them in one respect—it saved them the labor of raising more than they needed. But having no markets they were unable to buy more if for any reason their own supply became exhausted. Without markets and middlemen they were never more than one jump removed from famine. With markets and middlemen we are three or four jumps removed from famine. That is, in brief, the service the middleman performs. It explains why we have been willing to pay so much for his up-keep and maintenance; for he has been indispensable to the maintenance of our markets.

He always will be necessary, to a certain degree, but there is reason to hope that a better system will sometime prevail. Conditions have changed since the early Colonial days, while our marketing system has not as yet changed with them. Transportation is easier than it was then—faster and cheaper. Communication is vastly quicker. Judged on the basis of time required for these two things—transportation and communication—our whole country today is scarcely larger than a good-sized town of that early period. It would seem, therefore, that a way might be

found to dispense with some of our middlemen and send produce to the consumer by a more direct route without any loss of efficiency.

But that is largely a problem in organization which no doubt time will solve. Our business here is with the present, in which we find that the old order prevails, and we must adjust ourselves to it. With that in mind, I believe it is still possible and practical to shorten the route by one link for a considerable part of the honey crop. This would apply especially in sections where a large quantity of honey of uniform quality is produced year after year—such, for example, as the clover belt of the North.

In a good locality of that kind the bulk of the crop is too great for local demands to make much impression on it. Therefore any plan that involves selling direct to the consumer or to local grocer is found inadequate. But it would look perfectly feasible under these conditions to go after the wholesale trade.

Some individual producers have done this,—the late R. F. Holtermann, for one, although I believe he sold his whole crop to one wholesale house. He had 80,000 pounds one year and the next year less than 10,000. Whether he bought enough in that lean year to supply his wholesaler or whether he left him to wrestle with the deficiency alone I do not know. But in any case it illustrates the disadvantage that a single producer has in attempting to do what is essentially a jobber's job. A number of producers joined together, and pooling their crop, could overcome this difficulty.

Whether they did this as a private concern or as a co-operative organization would depend on the circumstances, and of course on the individual preferences of those concerned. An association along the lines, for example, of the California Fruit Growers Exchange would give all the benefits that could be expected from a smaller organization, the added feature of doing away with a lot of unnecessary competition. The crop could be graded and packed in a uniform manner and at a minimum cost. The amount handled would justify maintaining well equipped packing houses, trained salesmen and, in short, a going, year-around business.

There are some individuals operating on a large enough scale to do this alone but the vast bulk of the crop is produced by smaller operators. And thus far I have seen no convincing proof that the big men could not do just as well or better by joining hands with the others. Some have taken the lead in movements of that kind.

In whatever manner the details of organization might be worked out it seems to me that in this direction lies a profitable outlet for a good portion of the main honey crop of the country.

———ABJ———

3,811

This is the actual number of packages of honey publicity material mailed out from the office of American Honey Institute during a period of only 10 days to persons other than our members and the Auxiliary ladies. Of this total:

1,282 sets of contest and Honey Harvest Week publicity were sent to extension workers in 30 states.

386 copies of 100 Honey Helpings were requested by that many managers of soda fountains. Honey Harvest Week publicity was sent.

550 food page editors of newspapers and magazines received contest and Honey Harvest Week information as well as honey recipe leaflets.

25 editors of trade journals etc. were sent announcements.

Of further interest is the fact that during this same 10 day period 16,000 copies of the contest rules was sent to extension workers, grocers, and Institute members and 1,115 Honey Harvest Week window streamers.

2,113 sets of free recipes have been sent to homemakers at their request since January 1, and 232,000 pieces of literature about honey have been printed since that date.

Even though thousands of persons have been contacted, many of them will need to have honey called to their attention again and again before they will start to use it regularly. Many of them are no more anxious to use honey than hundreds of persons producing it are to support the organization which is functioning to educate the public to the merits of honey. We hope you will pardon this frank statement, but isn't it true? See page 428.

Memory "Jerkers

Institute members! Contest rules and Honey Harvest streamers are going in a hurry. Remember? They're free. Is your order on its way?

Non-members! Rules and streamers are available to you too. Write American Honey Institute, Madison, Wisconsin for samples and prices. Five cents will bring a copy of Institute Inklings. The biggest nickel's worth of honey selling ideas you ever saw.

Thirty days hath September, April, June and less than that to get contest rules out.

Read your mail lately? There's gold in them thar Institute envelopes." They come out now and then—sometimes oftener.

Advertise honey in newspapers—display it in windows.

Help to make Honey Harvest Week coast to coast.

All who tie-in with these publicity programs will find a great increase over the normal demand for honey. More profits!

———ABJ———

Thoroughly Immune

"That feller from State College," said Old John Hasher, "Was tellin' me that a man can get immune to rattle-snake poison so it won't hurt him, just by bein' bit times enough, same as I am to bee poison from being stung so much."

"How's a body going to get immune to rattle-snake poison without the likelihood of getting himself killed the first time or two he's bit?" demanded the neighbor.

"Easy enough," replied the honest old John, "if he uses his head, same as I did with the bees."

"How was that?"

"I just made sure never to git stung until after I'd been at it long enough so the stings wouldn't have any bad effect."

W. H. Hull,
Virginia.

———ABJ———

Our Cover Picture

We did not tell much about our August cover. It was not noticed until there was no room left to make mention of it.

That picture of the queen and the attendant circle of bees was widely commented on. It is an unusually good picture, taken by Everett J. McNay, now at Davis, California. Readers will remember our mention of McNay a number of times. He is now engaged in research work with the University of California, and also in breeding queen bees by modern genetical methods, including the use of instrumental mating, which he learned under Dr. Watson in New York.

Mr. McNay is an expert photographer and is to be complimented on this August cover, one of the best pictures of the queen and her retinue we have ever seen.

The picture this month of apples is given us for use by the "American Fruit Grower." This is the month of harvest. It is the end of the beekeeping season and the end of the fruit growers' year, so this product, which is the combined effort of blossom and bee and suitable weather, together with the care of the beekeeper and the fruit man, is a fit subject for September.

Apiary of E. L. Sechrist in Tahiti in 1937. Just behind the fence is a double brood chamber hive.

Beekeeping in Tahiti

By E. L. Sechrist,

Tahiti.

EVERY beekeeper who has been shut away from his bees for months at a time during long cold winters when they were consuming good honey, instead of storing it, has wished that he might live in some tropical land where bees gather honey all the year from the ever-blooming flowers. He has longed for a place where there would be no feeding in the fall to provide sufficient stores and where there was no bad spring weather when bees might starve or suffer from unseasonable cold.

These are a few of the good things he expects of the tropics, together with delicious fruits dropping from the sheltering shade trees almost into his mouth. He has imagined, during long winter evenings, what a pleasure it would be to live on a tropical plantation that would be like a corner of the Garden of Eden, where everything would grow almost of itself and where his only hard work with the bees would be to take off super after super of honey whenever he wanted it.

Villa Debure, Tahiti; a great rock at the left. The road and bridge across the stream are at the mouth of a small river that comes down the valley. The sea is about ten yards below the bridge. This is where Mr. Sechrist lives.

All this he has dreamed of, and he has bemoaned his hard fate as a beekeeper in a temperate land where, to get only one honey crop, he must bend all his energies to making his colonies ready to catch a rapid nectar flow during a few short weeks, because he knows if he misses that chance he will have to wait a whole year instead of getting another crop a month later.

Truly there is a fascination in living in a land where the bees fly every day in the year; where they gather pollen and rear brood continually; where sunshine and rain without drought or winter cold make vegetation always luxuriant; where the palm tree waves its evergreen fronds and coconuts drop on the green grass beneath; and where the happy beeman can pick luscious tropical fruits and even whole bunches of bananas in his own back yard.

And it is a joy, too, to sit on a hillside looking down on one's own plantation and far out over the great Pacific Ocean whose beauty is always changing and is never for two days the same; where an occasional ship may be seen in the distance, and fishing boats nearer the shore glide peacefully along, while on the beach and in the shallow water brown-skinned children laugh and play and dive under the foaming breakers. One can meditate on infinite things and almost forget his work; or imagine that he is living in those primitive times when mankind was a shore-dweller on the edges of the great seas, and, supposedly, had no cares or troubles other than to find his daily food in the water among rocks or on the grass under the trees which grew at the water's edge.

But he who makes his home in a tropical South Island soon begins to think of the old saying, "All is not gold that glistens," as he goes about his daily duties and finds out both the pleasant and the unpleasant things about these isles which the armchair traveler idealizes in his dreams. Yet they are delightful places to visit; delightful to live in if one finds that he likes the kind of life he must live there.

To write of beekeeping in Tahiti, it is necessary, as well, to write of the life and living conditions, because one cannot be understood without the other. Playtime in Tahiti is delightful and free from care, but coupling playtime and work is quite something else. Getting one's food here requires more thought and planning than it does to go to the corner grocery and buy all one's foodstuffs day by day.

Where Faana creek empties into the ocean. In front it is almost a river. The women are washing clothes while the man tends the baby. This scene is about sixty yards in front of the Sechrist home.

Our house is near the sea, at the mouth of the Faana Valley, with a little river running into the sea not far from the house. The road around the island lies between our house and the sea. We are about 50 miles from Papeete and the truck carrying passengers and freight passes our place sometime between three and five in the morning, and we get home, on the return trip from Papeete, at about six or seven P. M.—a trip of 100 miles for about 60 cents. But it is no pleasure trip as the roads are rough; the three-ton truck is usually fearfully crowded, being loaded with up to 50 people besides several tons of copra (dried meat of coconut), pigs, chickens, fish, fruits, and almost everything else imaginable. A day's trip, doing the buying in town for the next month is, in fact, a hard day's work, and we do not go to town oftener than we must. But to start out in the bright moonlight at 3 A. M. and travel along the road between sea and mountains, seeing the gradual change from moonlight to sunlight and all the morning activity of the villages along the way is a trip not to be forgotten.

Faana Valley is narrow, and the

Kitchen side of the house of Mr. and Mrs. Sechrist in the Faana valley, Tahiti. The stone wall is at the bank of the small river and was built to prevent floods from eating their way into the kitchen. A stone stove and oven under the shed. Woven bamboo construction in the gable of the house.

thirty acres in it extend to the top of the mountains on each side and back along the river to a waterfall about fifty feet high. The valley is very picturesque and beautiful, being largely wild land; but there are some native gardens in it, and we have ours also, as well as our bees and chickens which are of considerable importance in furnishing our daily food. We have put a little dam across the river near our house giving us a nice pool where white Muscovy ducks add their touch of interest. Below the dam we have a water wheel connected to a small generator to give us a bit of electricity. Piped down to the house from a big spring in the rocks is our supply of clean, soft water for bath, kitchen and toilet. The overflow supplies a lily pond. Thus we have some of the comforts of civilization as well as much of the wilderness.

Back in the valley are many breadfruit trees and clumps of bananas of which we have more than a dozen varieties; papaya trees furnish us an excellent substitute for the morning cantaloupe, and we have limes to eat with them and for lemonade, with honey. There are also mango and other fruit trees and we are planting more. At present we get avocados from neighbors but our own trees will soon be bearing. We have plenty of coconuts and a few vanilla vines to furnish us their beans which develop their full fragrance only after weeks of daily exposure and drying in the sun. A small, bearing, coffee plantation gives us more coffee than we can use, and we have planted some cacoa trees to furnish us cocoa.

Growing sweet potatoes, taro and other potato substitutes, greens and salads of several kinds; trying to grow tomatoes and other temperate climate vegetables which frequently fail in the tropics; keeping down weeds which grow all the year round even more luxuriantly than worthwhile things; looking after the bees and chickens; caring for flowers and ornamental shrubs and vines; doing the thousand jobs that crop up day by day—all these tasks require much of our time, so that never in our lives have we been busier than here, in Tahiti, where for two years my wife and I have been making a home for ourselves. Without a companionable wife, it surely would not be a Corner of Paradise. Now we have flowers and fresh fruit every day in the year. We grow most of our own food and many of our meals are entirely of foods from our own land—and they are good meals, too.

Perhaps it should be said, in the beginning, that one cannot live here without a regular income. There is no chance to work for wages, but the cost of living can be kept low if one works and plans wisely. There are few white neighbors and one must depend largely on his own resources, yet we have a few visitors every Sunday afternoon when we have an open house and serve tea to our American and other friends who find it convenient to come.

I keep 40 to 50 colonies of bees. You will ask: Why not more? Because that number will produce as much honey as I can sell profitably. There is no export market. The excessive cost of containers does not permit shipping our honey which is mostly not of high grade according to market standards. Honey produced by the Tahitian natives, in box hives, and squeezed out of the combs, sells for about one dollar for five gallons. I don't think I can afford to sell extracted honey produced in modern hives at that price. What I do produce is sold to Europeans and Americans who are willing to pay about three times that price for dependably clean honey of good quality. I have only myself to compete with, for there are no modern apiaries here except mine and a small one of 15 colonies which I also operate. While this is not a good honey-producing country, 50 colonies will supply the demand for good honey. I ship a few queens to the U. S. and Australia, but shipping conditions are not good and I lose too many queens enroute.

I consider this island, which lies south and west from the United States, about as far south of the equator as Hawaii is north of it, the most desirable part of the tropics in which to live or to spend a vacation. It is true that I have seen scenery even more beautiful in other tropical countries; and that more interesting vegetation and finer displays of flowers may be found elsewhere; and that birds of brillliant plumage and with sweet voices are not to be found here; also it is true that other places are more interesting historically, and that better beekeeping territory is to be found in the West Indies and Central America; but Tahiti has some advantages over any other place that I know. Greatest of these is its freedom from malaria, the worst enemy the white man has to contend with in the tropics; it saps his vitality and opens the way to more deadly diseases. Again, venomous snakes are a pest in most tropical countries, while here there are no snakes and no wild beasts; nor are there pestiferous plants such as poison oak and poison ivy; nor any chigres, or dangerous ticks.

One can wander freely over the mountains and in the jungles, at any time, day or night, and be in no danger. He may rest anywhere, and no poisonous plants or snakes need be looked for. And the people are friendly and courteous. Of course, it does rain a great deal at some times and in some places, and mosquitoes are a nuisance, but they are neither so plentiful nor so ferocious as I have seen them in Hispaniola and **they do not carry malaria.** I know what it means to live where just one mosquito bite will insure that a man will go to bed with malaria about two weeks afterward; and I know what it is to carry a lantern if one goes even a rod away from his house at night, lest he step on a poisonous snake or be cut off from his house by a lion or leopard. And I well remember that two years after I had returned from Africa I found myself walking along the streets of a big city, carefully looking on the cement pavement for snakes, just because, in Africa, for four years, I had not walked a step without keeping a sharp lookout ahead of me on every path, beginning with my own doorstep where I once found a poisonous snake coiled up, basking in the sun; and when there was no path, I carried a stick and opened up the grass ahead of me to be sure there was no snake to step on, at the same time keeping an eye on any branches overhanging the path lest, while I was looking on the ground for puff adders and black mambas, I fail to see a green mamba hanging down from a branch awaiting a passing victim.

Here in Tahiti one does not have such troubles but we do not have the wealth of gorgeous flowers such as one imagines of the tropics, except introduced ones, of which we have many. It is a green, green country and needs more color in it. The only inhabitable land is a narrow strip along the seashore and the mouths of the many small valleys. The mountains are so steep and come so near the shore that one sees little of their beauty unless he climbs high up over steep trails or goes out on the sea in a canoe.

Beekeeping in Tahiti cannot be a great industry. Honey production in most countries depends on introduced and cultivated plants grown over great stretches of country. Here there are no such lands and no such plants. The mountains are mostly covered with ferns, only the narrow valleys and a few wet spots in the hills having forests—and it is a misnomer to call them forests because there is not one forest where a sawmill, even a small portable one, could be located profitably. Trees are nearly all small and the few large ones are not suitable for lumber. In the old days there were more large trees, but these have been cut for canoes—they used to make dugout canoes 60 feet long—and plot after plot of land was denuded for cultivation only to grow up in scrub and fern when it became too much work to keep it clear. Native tropical cultivation consists, usually, in clear-

ing the underbrush off a piece of land, lopping the branches of the larger trees and leaving the stubs; then burning the brush and planting one or two crops. Then the weeds and brush, encouraged by frequent rains and genial climate, overrun the land, and a new bit of forest is cut down. Fires, too, run so easily in this fern and brush when it becomes dry, as it does sometimes, that new forests have little chance to grow; and no one thinks of planting any. Even fruit trees are almost never planted but come up where seeds fall, sometimes growing to be trees if pigs do not root them up. goats nip them off, or something else happen to them.

In Hispaniola there are forests of logwood trees—tracts of thousands of acres—which produce nectar in abundance over a long season—there are really two blooming periods; and large acreage of a near relative of the mesquite or algaroba grow in other places; also many other nectar trees and plants are plentiful. But here it is not so. Coconut palms produce plenty of pollen and some honey. So do bananas. But there are no large acreages. There are patches of coffee. Its blossom time is very short and it seldom produces much nectar. There are numerous fruit trees scattered at random which produce enough strong flavored honey to spoil honey of better quality such as comes from a few of the wild trees which are scattered thinly over the land. There is one spot having enough orange trees to produce some distinctively orange honey but it involves a climb of 3,000 feet up mountains where there are foot paths but no roads.

Then, again, it may happen that heavy rains at the time some native nectar tree is blooming spoil all chance of a crop from it. Such was the case last rainy season. After that, no surplus could be expected until the middle of the dry season, six months away, but that hope was blasted this year because of too much dry weather. And now, I am waiting hoping that the long delayed rain will not fall too heavily in about a month from now (November) when we again expect some good honey from the **Mape** or Tahitian chestnut tree.

Of course, bees do thrive here and take care of themselves unless one takes too much honey from them. They live almost anywhere, in a hollow tree or on a branch of breadfruit tree under its big heavy leaves, or in any kind of box, even with one or two sides open. But large crops of honey are not to be expected. This is an island of small things, primarily a land of small homes and plantations. There is only one factory on the island; a sugar mill operated by Chinese; and the island itself is small, only thirty miles across.

On much of the island there is a large acreage of a thorny pest, the lantana, introduced as a flowering plant for gardens, but now run wild. It makes a terrific, impenetrable jungle and produces considerable nectar; but lantana honey tastes like low grade molasses and is not liked. Fortunately it has not yet reached that part of the island where we live, but it is to be seen along the road, ten miles away from us and it will be here sometime as its spread goes on unchecked.

Besides my standard ten-frame hives, I have some experimental hives and some box hives for increase and to produce wax. I hope to find some way by which wax production can be made more profitabe than the production of honey, but the seasons have been so irregular that all my plans go awry. Then, too, we have been so busy building a home, planting ornamentals and food plants and trees for the future and getting and preparing food day by day, that much time goes by with only a little experimental work done. But I can say as did the Great Edison, when asked what progress he was making: "I am finding out thousands of things that won't work." And I still have hopes.

ABJ

We Spread Brood

In the orthodox bee books there are paragraphs warning the beginner against the practise, once recommended by famous beekeepers, of "spreading brood." The idea is to insert empty combs or even frames of foundation, into the center of the brood nest during the spring, so as to speed up its expansion. The argument against it is that the brood on the outside is likely to get chilled and, apart from that, the tendency of recent years has been to leave the bees alone and to teach that no manipulation can beat the natural tendency of the bees to build up during the period preceding the main honeyflow.

Several years ago, however, we began to try out spreading the brood and by now we think it is a good plan under our conditions, and used with a little common sense. This was brought home to us in May of this year under the following circumstances. At the home yard were about 200 colonies from packages that arrived here in the same load on April 24 and were hived on April 24 and 25. By May 15 there was honey coming in from wild fruit bloom and the first dandelions, and most of the colonies had brood in three or four frames, with young bees due to emerge within a few days. Conditions being thus about right for spreading, we went around putting an empty comb in the center of each brood nest.

However the weather suddenly turned cold when we were half way through the yard and the work was stopped. For a few cloudy and cold days we waited with some anxiety lest we might have done more harm than good. When it warmed up again the colonies were examined. Not a case did we find of chilled brood, but on the contrary all the hives that had been spread had filled their combs with eggs and young brood, but hardly one of the others had attempted to expand the nest. The spread colonies are just about a frame of brood ahead of the others as this is written, and will probably stay that way clear up to harvest.

If anyone wants to try the plan, please bear the following points in mind:

1. Do not try it too early. Wait until fruit or dandelion bloom.
2. Spread only colonies that are thriving, with good queens that will fiill the new comb in a day or two.
3. Do not repeat the process until the brood last spread is a week old.

If these points are observed, the method is to be recommended. The bees use the combs on either side of the brood comb as storehouses for pollen and nectar and are sometimes slow to clear the combs for prolific queen. If she finds a large amount of vacant space inside, she will fill it up quickly.

Hy. W. Sanders,
Manitoba.

ABJ

Memorial Number To C. P. Dadant

The staff of the American Bee Journal as well as the Dadant family were pleased and gratified to receive recently the June issue of the Bee Kingdom magazine which is a monthly review of modern bee culture and published by A. Z. Abushady, of Cairo, Egypt

Abushady will be remembered as the first editor of the Bee World and a world renowned bee authority.

The June number of the Bee Kingdom is a Dadant memorial number and is given over entirely to the memory of the late C. P. Dadant who was editor of the American Bee Journal from 1912 until his death in 1938.

Articles are included by the editor himself, as well as by worldwide acquaintances of the late Mr. Dadant, including Baldensperger, H. F. Wilson, L. F. Harker, and members of the staff.

Members of the American Bee Bee Journal staff also have small contributions, and two or three outsanding articles written by Mr. Dadant during his life are reprinted.

Dr. Miller's Home Today

Here is a picture of Dr. Miller's old home at Marengo, Illinois. The thermometer was about 28 degrees above zero with a drizzling rain when it was taken in February. I had to climb a tree to get a fair shot. The home is much the same as it was when Dr. Miller was alive. The property now belongs to Prof. L. A. Duncan, of Northwestern University. He has remodeled the inside, but has kept the old original outside lines the same.

One can easily vision Dr. Miller going about his tasks and pleasures as he used to do. The place seems still to radiate the welcoming atmosphere and friendliness just as it did in the old days. The only things missing are the family, the bees, and the flowers. It is an inspiration to visit the old place, cherished in our memories, rich in bee lore.

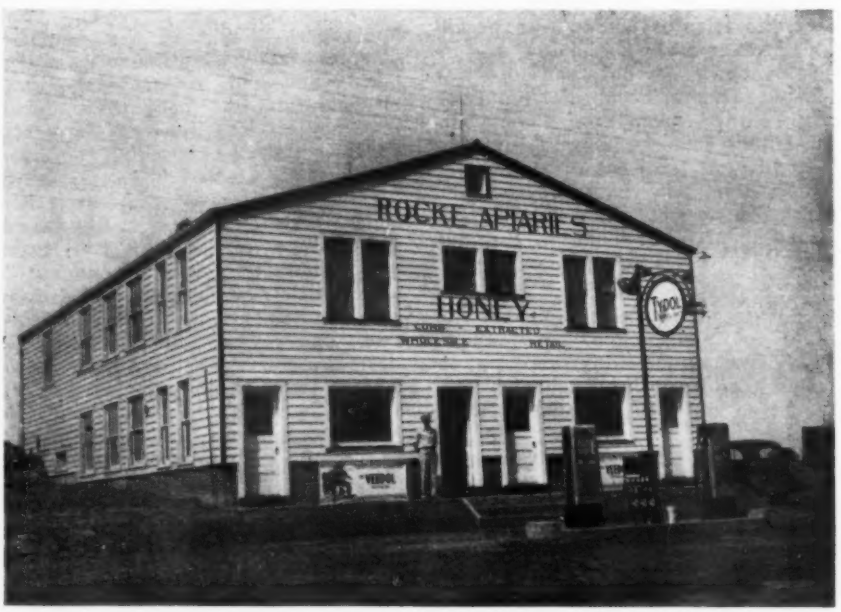
Hoyt Taylor,
Illinois.

—IBJ—

Rocke Brothers' Honey House

Friends of Rocke Brothers, Eureka, Illinois, will be interested in this picture showing their new honey house, honey packing and central apiary plant, which has been finished only a short time. These young men have become well established in beekeeping and represent probably the best of the new lot of the younger generation of beekeepers that have been coming into the picture of beekeeping in the past ten years.

It has often been our thought that hustling young folks interested in beekeeping, with a plant of this sort, could and should make it serve as a honey packing, extracting and central distribution plant for a considerable territory. Many beekeepers are not in a position to invest heavily in equipment of the kind that is represented in a building of this type. There is plenty of opportunity here for some real business development.



How to Stop Robbing

The following method of stopping robbing occurred to me last summer and was tried with success. It is so simple and effective that it is strange nobody has ever thought of it before. Here it is:

Every apiary should have one or more ventilated Porter escape boards even if they are not required for their original purpose. Go to the robbed stock as soon as the trouble is discovered, turn the bottom board deep side up if it is not already placed that way, and insert the escape board between the bottom and the hive body with the round hole of the escape upwards in such a way that the bees can get out but not in. The robbing is immediately stopped as the robbers can escape but cannot get into the hive. Any of the lawful inhabitants of the colony returning to the hive will cluster underneath the wire escape board in the space provided by the bottom board. Robbed colonies are not usually strong ones, and though I know nothing of the American climate, the weather is never hot enough in England to cause the suffocation of a colony treated in this way. The robbers will soon cease their activities when they find they can no longer get into the hive, and just before dark when all is quiet the robbed colony may be examined to make sure that it has a queen, the escape board can then be removed and the bees clustered on it shaken off and allowed to run into the hive, when the entrance can be reduced to one beeway. The robbed colony will have the whole night in which to reestablish normal conditions and there will be no resumption of the trouble the next day.

L. Illingworth.
England.

Reciprocity in the Honey Business

By H. R. Simpson,

Colorado.

THE reciprocity this discussion is concerned with does not involve international boundaries, yet it is one of the most important of all business principles affecting honey producers. Every beekeeper should understand and capitalize it.

Quality and fair prices the progressive beeman will offer as a matter of course, as he markets his product. However, important cards to play are all the beekeeper's business and the family purchases through the year, and other favors he can bestow.

All of us like to do business with those who do business with us. It is a great human principle, universal in its power.

There are some who feel that only "little fellows" in the business are interested in reciprocity. Investigation proves that big business, as well as little, constantly heeds it.

Related a Pacific Coast beekeeper, who markets his production to retail stores, "I have been calling on grocers for years now, and I never have found an approach which is better than first buying something of the merchant. With a 50 cent purchase, I have often paved the way for a successful sales interview. And purchases I make when delivering supplies I know do a lot to keep an account well disposed toward me."

The beekeeper who does not understand salesmanship will scoff at this. He will reflect that the grocer, of course, will see the motive in the honey seller's buying, and will be contemptuous of it. The practical answer is that when a buyer orders merchandise, and planks down his cash, the grocer has mighty little thought for motives—and an automatic sense of gratefulness. Small purchases become big with influence.

The same reciprocity psychology is so powerful that, with it, any beekeeper should be able to "line up" a number of dependable, year-round permanent, retail outlets in his home community.

Without any particular thought, reciprocity will line up outlets. However, there is a world of difference in the judgment which, in practice, we find producers exercise. Generally speaking, the producer with a sizeable volume of honey to market should forget, as he goes about his reciprocity-selling, the cheapest places to buy food supplies. It may be hard for a thrifty family to do this—accustomed to careful shopping for every home purchase. However, the greatest profit reposes in finding the most profitable honey outlets, and it does not follow, by any means, that these will be with stores noted for low prices.

The store which will give one's honey the best promotion, sell the largest volume of it, paying a fair price at all times, is the store to cater to. The merchant who will put in special window displays, hold a fall "honey sale," often list honey in his advertised leader is the prize customer. To obtain and hold him, perhaps it is mighty good judgnent for the beekeeper to concentrate all family purchases with him.

In another situation, however, no store can be developed into an ideal outlet, and best results come from accepting the condition, and obtaining as many local outlets as possible, dividing one's family business among them.

Wherever the family buys food, it can make its account more valued if, buying on a charge account, it always meets the bill promptly and if, in the day-to-day relations with the store, there are no petty complaints. The family can well, indeed, be mighty patient with any store which is a good retail outlet.

"There are several people to whom in the course of the year, I give considerable employment," a beekeeper informed. "I inquired where these purchase their groceries and meats, then asked them to solicit the merchant. I secured two very good outlets in this way."

Illustrating the many variations of the reciprocity principle, a honey man finally secured the Excelsior Market. He had approached the management a number of times over several years, without any results. Then he adopted different strategy.

He went to Mrs. Gilbert, wife of the old family physician, whom he had learned dealt with Excelsior Market. He gave Mrs. Gilbert a sample of his honey, with the suggestion that if she liked it she telephone the Excelsior Market and request that the Market stock the beeman's brand. He secured similar cooperation from the wife of a local lumber dealer, and a restaurant operator.

At these measures, the writer can hear an unsophisticated-in-salesmanship reader remark, "'Why, that would make the Excelsior Market angry—the beekeeper would defeat his own purposes!"

That may sound like logic, but it doesn't fit the facts. Food products manufacturers for many years have battled their way to grocers' shelves by securing, through advertising and sampling, the aid of customers. Grocers like to receive such requests, for it gives them an opportunity to please people, and thereby continue to hold them.

Using the argument that his quality honey was locally well known, a beekeeper had placed it on the shelves of a leading store. Immediately he compiled a list of friends and acquaintances for whom he had done favors of one kind and another —whom he had patronized in a professional or business way. He sat down to his telephone, and called these, one after another, announcing he had placed his honey with the store, and explaining that it would help him a lot if the friend would call for the honey by name. Some of them did, glad to reciprocate favors done them in the past.

The producer who sets out to sell honey direct should, as a matter of course, compile a "reciprocity list." On it should be the dentist, lawyer, doctor, insurance agent, optometrist, laundryman, dry cleaner, theatre manager, express agent, druggist—and, in fact, all local people to whom patronage of one kind or another has been given in the past.

The beeman may add to the list the neighbor whom he campaigned for in the last election, the father of the boy he helped find a job for, and others befriended in one way and another.

It is simplicity itself to canvass such a list, and make substantial sales. The solicitation should be pleasant, confident, and full of appealing information about the product. There should be a degree of persistence, such as salesmen have a right to exert. The spirit of reciprocity, innate in almost everyone, will do the rest.

An early swarm from a Carniolan colony.

This is a second of two articles by Dr. Park on comparative tests of Italian, Carniolan and Caucasian bees. The first appeared in our August number, page 366.

Is There a Best Race of Bees?

By Dr. O. W. Park,

Research Associate Professor, Iowa Agricultural Experiment Station, Ames, Iowa.

Swarming

The reader is referred to "General Procedure" above for the description of swarm control methods used in this study.

Data on the number of swarms cast by each of the different races during the period of experimentation are to be found in table 6. These records show that with respect to comparative freedom from swarming, the Italians maintained their generally acknowledged supremacy, while the Carniolans demonstrated their strong tendency towards swarming, often in spite of control measures ordinarily found effective with Italians and to a considerable extent with Caucasians.

Table 6. Swarms Cast

Season	Caucasian	Italian	Carniolan
1932	1	None	4
1933	3	None	6
1934	None	1	1
1935	1	None	3
1936	5	2	1
Average	2	0.6	3

Caucasians seemed exceptionally bent on swarming in 1936 whereas the Carniolans swarmed less than usual. The explanation appears to be that if the date at which swarming strength is reached coincides with a dearth of nectar, little trouble is to be expected from swarming. If on the other hand, this date coincides with a light but protracted honeyflow, the swarming tendency is greatly increased.

A case of this nature occurred in 1934. The Carniolans had reached swarming strength and swarm cells had been built in practically every colony of that group. Just then a total dearth of nectar started and continued for about two weeks. One Carniolan colony in which the preparations for swarming were farther advanced than in the others, completed its preparations and cast a swarm, but all the rest tore down their swarm cells. When a heavy honeyflow started after two weeks of dearth, the Carniolans seemed dominated by the storing instinct and preparations for swarming were not resumed that season.

Since the other two races were two to three weeks behind the Carniolans in colony development, the dearth struck well in advance of any preparations for swarming and in all probability brought about a severe reduction in brood rearing which later was reflected in the fact that on the average both of these races together stored only a little more surplus than did the Carniolans alone.

The fact that excessive swarming occurred in only one race in any given season may be explained on the basis of the difference in relationships between honeyflow conditions and colony development in the respective races.

As to their response to swarm control measures, it may be said that neither Caucasians nor Carniolans were found to respond to such measures as readily as did the Italians. Of these two races, the Carniolans usually were the more unresponsive to control measures such as interchange of the two sections of a double brood chamber and the Demaree treatment.

Supersedure and Queenlessness

Supersedure is nature's method for replacing old and failing queens. It may be looked upon as a result of colony dissatisfaction with the performance of its queen. The length of time a given queen is retained by her colony may be taken as a measure of her period of productiveness. From this point of view, frequent attempts at supersedure may be taken as evidence of lack of vigor in the queens.

Under normal conditions, supersedure usually is completed without complications, but at times, unsuccessful attempts are a fruitful cause of queenlessness. Thus while supersedure and queenlessness are two different things and either may occur without the other, many instances which apparently begin as supersedure, end in queenlessness.

On the other hand, cases of supersedure frequently are diagnosed as queenlessness, because neither eggs nor young brood is present, the old queen has disappeared and the new one, still a virgin, is readily overlooked. In this instance, subsequent examination should reveal the error in diagnosis; but in cases of actual queenlessness it seldom is possible to determine the exact cause unless previous records throw light on the case.

Thus, while supersedure and queenlessness may be independent, frequently the relationship between them is such as to defy our ability to segregate them. Data recorded for these two phenomena have, therefore, been combined and are presented in table 7.

Table 7. Supersedure and Queenlessness

Season	Caucasian	Italian	Carniolan
1932	4	2	5
1933	7	4	3
1934	4	4	2
1935	7	9	6
1936	4	3	4
Average	5.2	4.4	4.0

If the races be ranked upon the basis of relative freedom from supersedure and queenlessness, we find that the Carniolans ranked first in 1933, 1934 and 1935, while the Italians showed up to best advantage in 1932 and 1936. The Caucasians ranked second every year except 1933 when they held third place. In 1934 their rank of second place was tied by the Italians and in 1936 by the Carniolans.

According to these records, the combined cases of supersedure and queenlessness averaged roughly 33 per cent for the Carniolans, 37 per cent for the Italians and 43 per cent for the Caucasians for the five year period. By comparing these records with those in tables 1 and 3, it may be observed that the race which showed the fewest cases of supersedure and queenlessness is the one that yielded the most honey, while the race which showed the most cases of supersedure and queenlessness yielded the least honey. Moreover, the inverse ratios thus obtained for the three races are relatively constant.

Queenlessness always—and supersedure frequently—is attended by a break in the continuity of brood rearing, hence it is entirely logical that colonies subjected to one or both of these handicaps should produce less honey than those not hampered by such interruptions.

Although these records are not sufficiently extensive to warrant any high degree of confidence, they are presented for whatever they may be worth. It is entirely possible they may at least indicate general trends.

Disease Resistance

Nothing can be reported upon comparative resistance to European foulbrood because the disease has not been present in our experimental apiary during the period of this test. With respect to American foulbrood, however, there have been occasional cases in the experimental yard, most of which have occurred among groups of colonies used in other experiments. No tests of any kind were made on this point but, in view of the fact that more or less American foulbrood existed in the vicinity and at times in the same yard, the following data may be of interest. During the period 1931 to 1936 inclusive, American foulbrood was found in one Caucasian colony in 1931, one Carniolan colony in 1934 and in six Italian colonies—one in 1931, one in 1932 and four in 1936—all operated in the same yard under this comparative study.

Disposition

No discussion of races of bees would be complete without some reference to disposition. Already attention has been called to the fact that there are different strains of Caucasians and Carniolans as well as of Italians, each differing in certain respects from other strains of the same race. Let it be understood, therefore, that in reporting our observations upon the dispositions of the several races we refer to the particular strains with which we have been dealing, and that our statements thereon are not generalizations on the subject.

Caucasians have been widely heralded as the gentlest of all races, and this may be true in general or of certain strains in particular, but of the two well known Caucasian strains (which will be referred to as Caucasian A and Caucasian B) observed by us under all sorts of conditions, neither exhibited desirable handling qualities to the extent shown by the Carniolans (Carniolan A). To be more explicit, at times when bees had to be worked during cold, windy or rainy weather when the use of considerable smoke became necessary in order to avoid a severe stinging, the Caucasians crowded up over the top bars and out onto their ends to such an extent that numerous stings on the fingers resulted during the handling of the frames. The Carniolans, under similar circumstances, showed less excitement and could be handled with fewer stings.

A wall of propolis erected at the entrance of the Caucasian bees.

In this connection Corkins and Gilbert (3) state that Caucasians are the most gentle bees ever used at the University of Wyoming, but add, "If Caucasian colonies are opened during bad weather they are sometimes more difficult to control than Italians."

Both strains of Italians (Italian A and Italian B) were considered gentle for Italians, and under favorable conditions could be worked with but little danger of stings, but on the whole they were not as gentle as either Caucasians or Carniolans. One disagreeable feature of the Italians was their propensity to buzz around the head of the operator and at times to follow him to the far corners of the apiary. This tendency was rarely observed in connection with either of the other races.

With reference to the handling qualities or disposition of the particular strain of the several races studied, our observations would require that the Carniolans be rated as the most desirable of the three, the Caucasians a close second and the Italians, third.

Robbing

In carrying out routine operations connected with various phases of our experimental work, there were numerous occasions when it was necessary to manipulate colonies during periods of partial or total dearth, when robbers were constantly nosing it at every opportunity. On such occasions it was noted repeatedly that bees of the two dark races were on hand in even greater numbers than were the Italians although, according to the number of colonies of each race in the apiary, the Italians outnumbered the combined forces of Caucasians and Carniolans in the ratio of 3 to 1. On one such occasion, numerous robbers were captured by means of a trap which was equally accessible to all. When the captured robbers were counted, the dark races were found to be represented in numbers out of all proportion to their representation in the yard. Plans to repeat this procedure a number of times were made but, unfortunately, were never carried out. Since the robbing propensity is so intimately related to the spread of American foulbrood, a comprehensive study of this trait should be made for various strains of the leading races.

Use of Propolis

In the Iowa studies, both the Caucasian A and the Caucasian B strains were found to use far more propolis

than either of the other two races under test. Each fall before hive bottoms on the Caucasian colonies could be adjusted for winter, it was necessary to chisel out the propolis barrier just back of the hive entrance because by it the hive bottom was securely bound to the bottom bars of the frames.

Among the Carniolans, an occasional colony was observed to show a tendency toward excessive propolization, but as a rule, Carniolans propolized their hives only slightly more than did the Italians. Thus in rating the three races upon the basis of comparative freedom from propolization, in accordance with our observations the Italians rank first, Carniolans second and Caucasians third.

It is recognized that there are differences of opinion as to whether the lavish use of propolis, as reported above for Caucasians, constitutes an undesirable trait. It is recognized also that some simple plan might be devised by which the inconvenience occasioned by the trait might be greatly reduced or eliminated.

Discussion

Honey Production—In a five year comparison between Caucasian B strain and Italians from various well known breeders, Corkins and Gilbert (3) found that the Caucasians held a 71 per cent advantage over the Italians in the amount of honey produced. Likewise, Hutson (6) has reported that the Caucasian strain received from Gorbacheff of Tiflis, Russia, led the Italians (strain not given) in honey production by a margin of twenty-five pounds on the average, but he failed to indicate what this difference would represent on a percentage basis. But from a test which had run three years when the last available report was made, Gooderham (5) gives figures which show that Italians maintained an average lead of 26 per cent over the Caucasians. Strains were not mentioned for either race. And in the Iowa five year comparison, Italian A and Italian B strains surpassed Caucasian A and Caucasian B strains to the extent of 25 per cent on the average.

In a six year comparison of Carniolans and Italians (strains not mentioned), Gooderham (4) gives data which indicate that the Italians maintained an average lead of 39 per cent over the Carniolans. In the Iowa five year comparison, on the contrary, the Carniolans surpassed the Italians by 18 per cent.

Differences in strains, in environmental factors and in management may account for some of the differences in results reported above. It is to be noted that, although the Caucasian B strain was used in both the Wyoming and Iowa tests, its performance under Wyoming conditions appears to have been more satisfactory than under the Iowa environment.

In studying table 1*, the question may be raised as to why the Carniolans started in at third place, rose to second the following year, to first the third and from then on maintained their lead to the end of the test. Here is a probable explanation: Owing to their trait of building up so far in advance of other races in spring, it required two seasons for us to learn how to time our manipulations properly. In spite of that handicap they stored good crops both seasons, being only a little behind the other races in honey production. Thus the test was unfair to the Carniolans for the first two seasons.

Wintering.—Our method of wintering did not put any of the races under a severe test but the exceptional colony development of Carniolans in early spring bears testimony of their wintering qualities. The same to a slightly smaller degree might be said of Caucasians. On the topic of wintering observers have been almost unanimous in the praise of both Caucasians and Carniolans, and we have no basis for disagreement. Gooderham (4) found that Carniolans and Italians wintered equally well at Ottawa.

Table 4, giving a comparison of amounts of stores consumed during the winter, has been found thought provoking. It is to be noted that the Carniolans were consistently more economical of winter stores than either of the other two races, yet they built up faster and as a rule had almost reached swarming strength when removed from winter quarters. One cannot but wonder whether Carniolans may maintain a minimum winter-cluster temperature below the 57 degree level maintained by Italians. If so, is that fact related to the propensity of Carniolans to work in the field at lower temperatures than those at which Italians work? But Caucasians likewise work at lower temperatures than Italians, so how could we reconcile the above hypothesis with the fact that the Caucasians consumed on the average 13 per cent more stores than the Carniolans and nearly 10 per cent more than the Italians? Thus it appears that there still are some unanswered questions in regard to the fundamentals of wintering bees.

Swarming. — Considering Caucasians in comparison with Italians, Hutson (6) found one strain in which the swarming tendency was strong and another in which it was not prominent. Corkins and Gilbert (3) state that not one Caucasian colony swarmed in a period of seven years, but add that swarming is not a problem in the University apiaries. The results of the Iowa tests are in agreement with those of Gooderham (5), who found that Caucasians showed a stronger swarming tendency and were less responsive to control measures than were Italians.

The Iowa tests are in agreement also with Gooderham's (4) results on the swarming propensities of Carniolans which he found not only more persistent but also far in excess of those of Italians.

We are led to the conclusion therefore that some strains of Caucasians are more inclined to swarm than most Italians and that this tendency in Carniolans is decidedly prominent.

Disease Resistance.—As stated earlier in this paper, the all-but-universal popularity of the Italian bee in America is directly traceable to its ability to resist European foulbrood. Baldensperger (2), a recognized world authority on races of bees says, "This last virtue has put the Italians, as well as their stability, on a pinnacle which they do not deserve. The Italians are no more nor less immune to any disease than all our European and Asiatic bees."

Corkins and Gilbert (3) state that both Caucasians and Italians are susceptible to American foulbrood and to sacbrood.

Richmond (13), Mraz (8) and others have reported finding evidences that certain colonies of Caucasians possessed ability to resist American foulbrood. Alfonsus (1) reported that Dr. Muck of Austria had found a decided variation in the susceptibility of various bee races to **Bacillus larvae** infection. Dr. Muck's ratings indicate Italian bees as the least resistant of all, with other races in order as follows: Swiss, Black, Caucasian, Carniolan, and Lower Austrian as most resistant.

In recent investigations conducted under a different project, we (10, 11) have found representatives of all three of the races here considered which have demonstrated their ability to resist American foulbrood.

Disposition—Caucasians and Carniolans undoubtedly are more docile than Italians, as a general rule, although gentle strains of Italians are not difficult to obtain. Caucasians, as widely advertised may be the gentlest race in the world, but attention is called to the observation that when colonies are manipulated during bad weather, the Caucasians sometimes are more difficult to control than either Carniolans or Italians.

Robbing.—Observations on the robbing propensities of these races have been reported by Paddock (9), Baldensperger (2), Hutson (6), Corkins and Gilbert (3) and others. The consensus of opinion is that the two dark races are much less inclined to rob than are the Italians, although Hutson reports that Cau-

*Tables 1-5 will be found in the preceding issue, August, 1938, page 368.

casians attempted to rob the honey house in about the same numbers as Italians. In this connection also, our observations are not wholly in accord with the majority of those previously published, but as before, differences in strains may account in part for apparent discrepancies.

Use of Propolis.—Use of excessive amounts of propolis by Caucasians has been claimed by some and denied by others who have tried them. Hutson (6) reports having tested two different strains, one of which used little propolis and the other, much. This case shows clearly that different strains of the same race may be unlike with respect to one trait or another. Corkins and Gilbert (3) report that excessive propolization was not encountered during a five year test using the Caucasian B strain. The fact that the Caucasian B strain used little propolis at Laramie, Wyoming, but used it in quantity at Ames, Iowa, suggests the possibility that the availability of propolis might explain this divergence in observations on the same strain.

Remarks.—From the viewpoint of the practical honey producer, the ability to produce maximum yields not only outweighs but also epitomizes all other considerations with the exception of disposition and color. Not one of the three races considered herein is seriously lacking as to disposition, or handling qualities, and color surely is nonessential in the selection of a race of bees for commercial honey production.

On the whole the Carniolans made a good showing in the Iowa studies. It is expected that bees of this race may prove an outstanding success in the hands of a few; but, owing to its swarming propensities, we doubt whether this is the best race for the average beekeeper. In our opinion it would be unwise to attempt large scale operations with Carniolans until one has found by experience that he can manage them successfully. While they appear desirable from several standpoints, bees of this race present problems of management, as yet not satisfactorily solved. This progress report is offered in the hope that it may stimulate others to further investigations along these lines.

Summary

Statements refer to the several strains of Caucasian, Italian and Carniolan bees used in these studies and are not intended as generalizations with respect to any race.

Carniolans led in (1) honey production, (2) economic use of winter stores, (3) freedom from winterkilling, (4) colony development in spring, (5) freedom from supersedure and queenlessness, and in (6) disposition. Their most serious fault was their swarming propensity.

Italians ranked second in the highly important item of honey production, and led in (1) freedom from the propensity to swarm, (2) response to swarm control measures, and in (3) freedom from use of propolis. The Italians were considered somewhat deficient in winter hardiness, colony development in spring and in disposition, but on the whole there probably is no other race better adapted to the needs of the average American beekeeper, under present systems of management.

Caucasians failed to excel in any of the characteristics studied, but ranked second in (1) freedom from winter-killing, (2) colony development in spring, (3) freedom from the propensity to swarm, (4) response to swarm control measures, and in (5) disposition. They made a less favorable showing in honey production than either of the others, were less economical of winter stores and used propolis to excess.

Further studies are needed before definite conclusions and specific recommendations would be justified but in general it may be said that all three races are worthy of consideration. The race that pleases one man may not suit another. Beekeepers who plan to try out a different race are urged to do so on a small scale until they become familiar with its peculiarities.

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ABJ

Headlining Honey

Re-awakening of general business and resumption of aggressive advertising in many food fields, has once more stimulated thought as to the benefits that would accrue from honey advertising campaigns, especially those of a cooperative nature that would afford new headlines for honey.

On the Pacific Coast, and particularly in the Pacific Northwest region with its famous fireweed and clover honeys, or in California with its distinctive orange blossom variety and many special blends from sweet pastures of the bees, possibilities are unlimited for duplicating outstanding successes in these districts such as Washington Apples, Oregon Prunes, and California Oranges—all built upon vast cooperative advertising campaigns that have widened national markets.

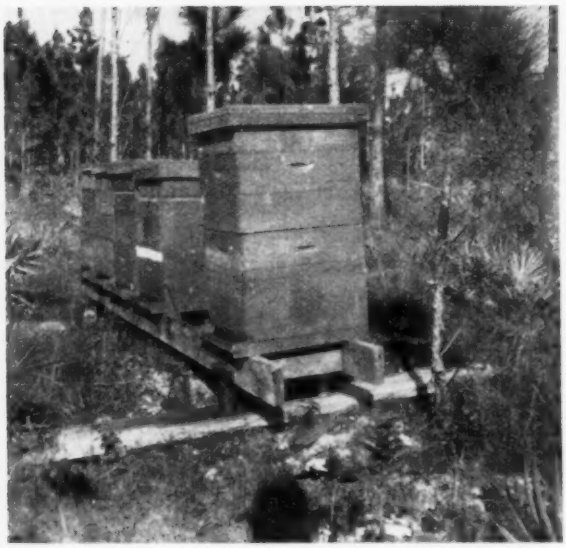
Producers on the Pacific Coast have looked with envy at the enchanting advertising for apples, oranges and prunes, created through concerted effort. Moreover through a wizardry of words, the impelling power and logic of the advertising appeals to consumers throughout the land.

In a similar manner, astute advertising can raise honey from a much neglected place in today's diet to one of the most exalted of the nation's foods. Not long ago the government's Bureau of Agricultural Economics even suggested the establishment of a more aggressive merchandising policy or cooperative marketing by the beekeepers to ameliorate the situation, and this has often been contemplated.

There are a thousand and one devices for extending the demand for honey—unique and original ways that may be employed for one of the most favored of vital health-giving foods of an amazing versatility. Scarcely any of these ways have been tried on a grand scale, with the power of advertising pointing out merits, creating popularity, and impressing prospective buyers with honey's manifold desirability—although of course some striking local campaigns have from time to time caused considerable interest and enthusiasm.

At annual meetings of honey producers in various regions, the subject of advertising has been touched upon, but there has yet to be quickened into life that spark which would result in a dynamic campaign to give honey its due. In some respects there have been insufficient funds and lack of definite leadership noted, but underlying these factors may be lack of appreciation anent the full value of advertising, and the striking results which will some day be accomplished through advertising and raise honey to its rightful place in the American household, and to a quotidian position on the home menu, where it will remain as the real and dominant autocrat of the American table.

C. M. Litteljohn,
Washington.



Apiary up on a wooden stand, typical arrangement in southern Florida.

Beekeeping About The Tip of Florida

By J. J. Wilder,

Georgia.

SINCE the days of O. O. Poppleton there has not been much said of interest to beekeepers around the tip of the mainland, extreme southern Florida, yet there has always been a considerable amount of interest to beekeepers in this particular section, especially during the winter months. It is truly the hottest spot in southeastern United States and is commonly called, "the outdoor hothouse."

President Grover Cleveland, while on a fishing tour around this section of Florida, landed his boat at Mr. Poppleton's camp, where he had an apiary and a flat boat loaded with bees. Mr. Cleveland was very much interested in Mr. Poppleton's bee adventures and remarked that he could do something not many people could, "make bees work the year round."

After fifty years of beekeeping on Cape Sable and Key Largo, Big Pine, and other keys, we still find many small apiaries. Coming back to mainland at the little city of Homestead, which is located in the center of the truck growing and fruit growing of that great section, we find a few colonies of bees, almost at every country home, used mostly for pollination.

Mr. Otto Stellrecht is the pioneer and most extensive beekeeper in that section, located at Rock Harbor, on Key Largo. He came from Stuttgart, Germany, fifty-seven years ago and homesteaded and immediately became interested and associated with Mr. Poppleton, and in 1910 bought out Poppleton's bee holdings, including his large flat bottom boat, on which he moved bees from key to key, during the honeyflows. Mr. Poppleton, at the time was in very declining health, and there it was at Largo Pass that he laid his armor down, and forever quit the fight as a beekeeper.

There has never been a complete failure around about the Florida tip. In 1918, the beekeepers made their banner crop, which they sold for eighteen cents a pound there. This put the largest beekeepers well on their feet for years to come.

It is very interesting to know that our last as well as our first tree on the mainland of the extreme southern point of Cape Sable is a honey plant of importance, black mangrove. Here it was that the veteran beekeeper, O. O. Poppleton, had his Cape Sable apiary. Mr. Stellrecht also had an apiary there for years, also a Mr. Hunt had an apiary there consisting of ninety colonies. So it is indeed a famous bee spot. Beginning at the very base of this tree, shown in the picture, rolls the great Florida Bay. In the distance can be seen Key Largo, which is the largest key in that section. To the southwest, seventy miles, lies the beautiful city

Otto Stellrecht, pioneer and extensive beekeeper on Key Largo. He bought the bees formerly owned by Mr. Poppleton.

Typical scene in southern Florida. Black mangrove along the shore line.

Waste places abound in uprooted trees and desolate spots like this.

In the everglades hundreds of acres are planted to beans, potatoes, tomatoes and winter vegetables. The beans are great honey plants.

of Key West, reached by the just finished, great Oversea Highway. It might be of interest also to state that a line drawn from the root of this tree to Cape Flattery, state of Washington, is the longest line that can be drawn across the mainland of our great country. It will be noticed that the tree has many dead limbs and very few lives ones, which is the result of the awful Labor Day, 1935, hurricane, that killed over seven hundred natives, and ex-soldiers on lower Matacumba.

Formerly beekeepers from far and near moved their bees into this section for the heavy black mangrove honeyflow. Today this great forest is completely dead caused by the great hurricane that laid waste a large forest on Cape Sable, which was at one time a happy beekeepers' paradise. The terrific wind and high waves that went through it completely killed every vestige of growth.

Nearby, in the surrounding Everglades, are many hundreds of acres that are planted in beans each winter as well as potatoes, tomatoes and other varieties of winter vegetables. This is very fortunate for the beekeepers, since the beans are great honey plants.

Large amounts of surplus are stored from this source during the dead of winter. It is sunny and balmy there when it is cold everywhere else. The bees are very active all the time rearing brood and storing some surplus honey.

Giant Cow-Parsnip: A Good Nectar Plant

One of the most promising honey plants that has come to light in recent years is a giant cow-parsnip, **Heracleum Mantegazzianum**, which a Dr. Levier found in the Caucasus Mountains of Asia in 1890. Even though the plant has been known for close to half a century, it remains quite rare and is unknown to most horticulturists.

It belongs to the great parsley family, which contains many economic plants of easy culture and others that have proved hard to propagate. The species under consideration appears to be one of the latter, the seeds being slow to germinate and the plants somewhat difficult to move.

The best method of handling it, according to the experience of gardners, is as follows: Sow the seeds in an outdoor frame in autumn, so they will have the benefit of frost action during the winter. If they are fresh, this treatment should give good germination the following spring. The seedlings should be taken up while quite small and planted in pots large enough to accommodate their root systems, and grown in pots until they are large enough to be planted permanently. This is necessary because the plants are hard to handle after they have made their growth sufficient to withstand outdoor planting. They may then be knocked out of the pots without disturbing the roots.

Do not let that growing schedule discourage you from having the plant, for it is much less formidable than it sounds. In the first place, one does not need nearly so many plants of this cow-parsnip, owing to its immense size and floriferousness, as he does of the common nectar plant. It makes its best growth in moist soil, where it will attain a height of six to eight feet, with each stem carrying a very large head, often four feet across, of white flowers. Dr. Levier, the discoverer of the plant, records the fact that he counted ten thousand flowers in one of these heads. Although the plant makes its best growth in moist soil, it will do quite well in any rich growing medium and should give a good account of itself in any soil that will grow good corn. Like many of the cow-parsnips, the plants should not be allowed to mature a crop of seeds, for the production of so many seeds as their immense flower heads are apt to form is usually too much for the plant to stand. If it is necessary to increase one's stock of plants, the produce of a single head should furnish enough seeds to plant acres.

—ABJ—

Business Changes Hands

Ohio lost one of their oldest and largest, as well as finest, beekeepers last year when J. F. Moore passed on. We have just been advised that his entire business, including his apiaries, honey packaging outfit, etc., have been taken over by Mr. Ray C. Bish who will be located at Tiffin, Ohio.

The author examining specimens of honey in his laboratory.

Ailanthus altissima as a Honey Plant

By Dr. B. H. Smith,

Indiana State Teachers College,

South Bend, Indiana.

Introduction

FOR some time a rather general opinion has prevailed among many beekeepers that the staminate Ailanthus tree, commonly known under the names of "stink tree," "tree of heaven," "varnish tree," and "Chinese sumac," was the source of much bad or inferior honey which they found in their hives each year. It is claimed by some that such honey can be identified simply by the color, taste, or odor, while others would be more cautious and use all three of the previously mentioned tests to identify it. It is claimed, futhermore, that the appearance of this inferior honey in the hives coincides with the time the staminate Ailanthus trees are in bloom.

As the result of these rather prevalent opinions, the Ailanthus tree has been much condemned by beekeepers, and a few of the more radical in this matter advocate the eradication of at least the staminate trees in those regions where they are numerous, as the only means of preventing serious losses in the honey industry.

The foregoing accusations activated the author to delve into this subject and to determine if possible to what extent the charges were true or false. A review of the literature reveals that little work of an experimental nature has been done along this line. One article by R. V. Sawyer, "Good and Bad of the Ailanthus," published in the January issue of "Flower Grower" for 1933, discusses the merits and demerits of the tree in general as to odor, color, beauty, and growth, but no reference is made to it in regard to honey.

Lovell in his "Honey Plants of North America" says the Ailanthus produces "an abundance of poorly flavored nectar." Numerous other writers refer to the fetid or the unpleasant odor, especially of the staminate flowers.

Pellett in his "American Honey Plants" says,

"Scholl lists it as a source of honey and pollen in Texas. Richter regards it as a wonderful yielder in California, where it produces an abundance of ill-tasting honey. It is reported as a honey producer in Georgia and is to be found in many states from east to west in greater or less abundance. The disagreeable odor of the staminate flowers is

(Above) Pistillate Ailanthus tree in winter, showing fruits on the tree. This is a very common shade tree in the author's region. (At right) Staminate Ailanthus tree in winter. This tree bears no fruits. Note the pistillate tree in the background.

a well-known characteristic of the tree.....

"In the vicinity of Paris, France, the ailanthus, also called ailanthe, yields honey which must be removed before other honeys are harvested, as it spoils the taste of the honey of other plants."

Two years ago, samples of supposed Ailanthus honey, one extracted and the other in the comb, were taken by the author to the Bureau of Entomology, Division of Bee Culture, United States Department of Agriculture, located at Beltsville, Maryland, for their examination. No experiments had been performed by them which would assist in the solution of the problem; namely, was this honey which is admitted poor of color and offensive to smell and taste the product of the Tree of Heaven? This was the first time they had seen the alleged Ailanthus honey.

Experimental Procedure

An experiment under controlled conditions was planned and carried out during the summer of 1937, in the greenhouse of the Indiana State Teachers' College at Terre Haute, Indiana. The greenhouse was screened at the ventilators with mosquito netting to prevent the escape of the bees or the entrance of bees. By the use of whitewash and paper, the intensity of summer sunshine was reduced. A four-frame hive of light Italian bees was placed in the greenhouse on June 7. About a pound of honey was in the hive. On the morning of June 8, the first load of branches with staminate flowers was taken into the greenhouse and placed in containers with water. Three days later, June 10, the hive was free of excess honey. Fresh Ailanthus blossoms were brought in on June 11, 14, and 17. There was much rainy and cloudy weather during this period, and the bees were not as active as they would have been in favorable weather conditions. On June 16, one frame was brought to the laboratory and examination showed four cells of pollen and sixty cells of new honey. The honey was extracted with a pipette and had a specific gravity of 1.23 and a light amber color. Additional honey was extracted two days later which had a specific gravity of 1.27. This honey was placed in an incubator and evaporated down to more nearly the consistency of honey as found on the market. In order that the pure Ailanthus honey might be compared and contrasted with other honeys, nine samples of honey from unknown origins were collected at random and two samples were contributed by beekeepers which they designated as Ailanthus honey.

Test tubes were filled approximately one-third full of honey from the various samples on hand. The various tubes were numbered and tests made to determine the ability of various persons to detect the Ailanthus honey and also the suspected Ailanthus honey. In order that we might get some idea as to the characteristics of pure basswood honey, we introduced branches of the tree-bearing blossoms on June 22. The combs were entirely empty and the bees were very hungry. The bees were exceedingly fond of the basswood as compared to the "tree of heaven." On June 25 the honey was extracted from the combs.

Results

1. The pure Ailanthus honey produced during this experiment was clear, light amber, yellow and did not resemble the murky, greenish honey which had been so-called Ailanthus honey.

2. An experienced beekeeper was able to pick out the pure Ailanthus honey from the others, but in so doing said it was partly guess work.

3. This same beekeeper was unable to locate his own samples which were given the writer as Ailanthus honey.

4. This same beekeeper was unable to locate the other sample which had been dubbed Ailanthus honey.

5. The beekeeper who was able to locate the Ailanthus honey was unable to locate the basswood honey.

6. Three of my colleagues in the science department were unable to locate the pure Ailanthus honey. One member picked out an alleged Ailanthus honey, solely on basis of taste dislike.

7. One of my colleagues picked the pure Ailanthus honey and pure basswood honey from the list and called them both poor. He also chose an alleged Ailanthus honey as one of the two best honeys.

8. The staminate Ailanthus flowers did not give an abundant nectar flow.

9 Bees collected pollen and nectar from the flowers.

10. A few bees were found working the glands at the base of the leaflets.

11. Bees worked basswood vigorously.

12. Basswood honey obtained in this experiment was a rather deep orange, amber and somewhat strong flavored. Lovell, in his "Honey Plants of North America" says, "Basswood honey is white and has a slightly aromatic flavor."

Ailanthus leaf and group of staminate flowers. (Reproduced by permission and courtesy of Emerson and Weed, "Our Trees," J. B. Lippincott Co.)

Conclusions

1. On the basis of the foregoing results, the writer is of the opinion that an expert honey taster might be able to pick the Ailanthus honey out of a group. More tests need to be made however.

2. It is extremely doubtful if Ailanthus honey can be detected by color alone.

3. It is very doubtful if Ailanthus honey can be detected by odor alone.

4. The average layman will not be able to detect Ailanthus honey as such, since honeys vary considerably in color, odor, and taste.

5. Much alleged Ailanthus honey may be due to some other source or sources. More work is needed here.

Acknowledgments

The author is indebted to the following persons for helpful assistance and cooperation during the course of this experiment:

Mr. Walter Bielfield, secretary of the Vigo County Beekeepers Association, who furnished the bees and many helpful suggestions.

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Mrs. Carabelle Dickey, of the Indiana State Teachers College Library, furnished much able assistance in the search for the literature.

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Cleaning Up a Neglected Apiary

By F. H. Inman,

Pennsylvania.

Here is part of a three hundred colony apiary which was left neglected in the hills of Pennsylvania. It takes approximately five years for an apiary once neglected to become simply a tattered remains of old combs, no bees and dilapidated beehives. The most precious possession of the beekeeper is his equipment and his combs.

We salvaged twenty-one colonies of bees, two hundred beehives, four hundred supers, two hundred pounds of wax and four hundred pounds of honey from the outfit. We burned everything which showed any trace of foulbrood.

The wax was rendered outdoors over an open fire and was it work! In the woods in the hot sun, carrying water, boiling combs and frames, with ugly bees all about.

In the hills of Pennsylvania, my partner and I salvaged twenty-one colonies of bees, two hundred fairly good hives, about four hundred supers, two hundred pounds of wax, and four hundred pounds of honey from what was a three hundred colony outfit three years ago.

You can see by the pictures that the brush and weeds had grown up around the hives until it took sharp eyes to find some of them. Sometimes in hunting around through the brush we would see a line of bees coming up out of a dense thicket. When we parted the weeds and brush, we would find a hive of bees, sometimes with the bottom board flat on the ground and rotted away so the bees could come out on all sides.

Hives containing American foulbrood were burned. We boiled in burlap bags the combs of all others that were questionable, scorched the hives, and boiled the frames in strong lye water.

We bought this outfit for a few dollars, but talk about work! We were back in the woods in the hot sun carrying water and boiling combs and frames. And were those bees ugly! We had to wear veils most of the time.

We shall have to keep this lot of hives and equipment by itself and watch colonies closely for disease, as many of the combs were so badly destroyed by wax moths we couldn't tell if they were free from disease or not.

You couldn't call it a paying proposition. Our main reason for cleaning up this outfit was to protect the other beekeepers in this section from disease. I believe neglected apiaries cause more trouble than all the other causes combined. If the good beekeepers in any section where disease is bad would get together and clean up these neglected bees, we wouldn't be bothered much with American foulbrood.

The equipment that could be saved would probably more than cover all anyone would have to pay for the yards. By using acid frames, careful beemen who thoroughly understand handling American foulbrood can save almost everything but the honey and brood. It doesn't pay for the average beekeeper to try it unless he knows what he is doing.

Quality in Your Labels

By Frederick E. Devoe,

Vermont.

This is the season of the year when thousands of roadside stands along the highways resume the business of selling fruits, vegetables, maple syrup, cut flowers and honey to city buyers and tourists.

To many, a strip of paper with some scribbling on it constitutes a label. In this day of keen competition, there are three points in advertising a product which are of importance—**a good label, a quality product, and a satisfied customer.** The cheapest kind of advertising there is is return sales, not only from local buyers but from the army of travelers that throng the roads in every state in the country.

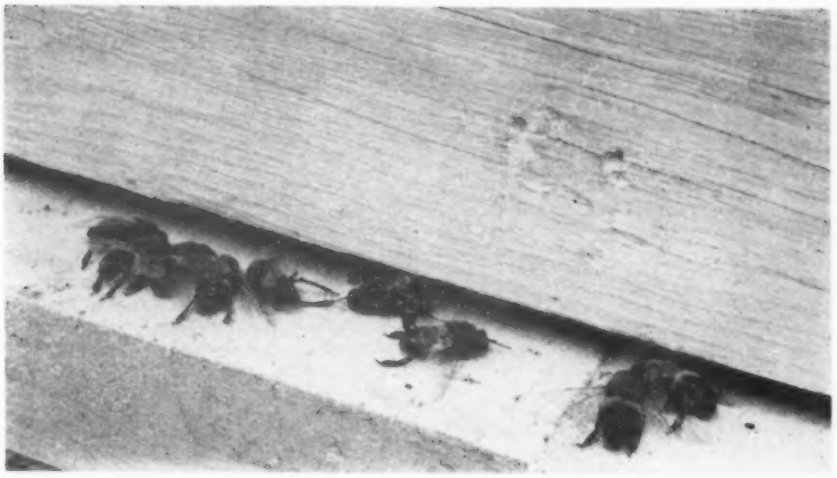
It must be remembered that a good label will not cover the sins of an inferior product. If we sell a quality product and are situated ten miles or so from a big city on a well traveled highway, we can do a fair business.

Suppose we have a clear, water white clover or golden honey which we know to be pure, clean, wholesome, and delicious. Let us not put that goodness up in any kind of a container with any kind of a label. The label must identify us as well as our product.

What can we do about it? Well, pick out a trade name which can be built into a well worded layout with colors to harmonize with the product. It doesn't have to be flashy. A label with a background of light green with a clear, dark green type and clean cut letters, prominently displayed, is highly desirable. Under this a minor description in smaller type in lighter green and the whole encased in a margin of yellow or light blue and don't forget that there are many well designed labels already available for beekeepers and samples of them just for the asking.

Having decided upon a label, use a good glass or metal container and cellophane wrappers for the comb honey.

Now we have something to display. Business should step up. We should make old friends out of new customers. We have put old-fashioned goodness into a neat, modern package.



The Seasonal Tragedy

The accompanying photograph pictures a scene at the entrance of a beehive on a crisp September morning. These drones, mercilessly exiled from their citadel by the workers, grouped themselves together for mutual comfort until hunger and cold had stiffened their defenseless bodies into motionless forms. This, the unfailing sign that another season has come to an end and its chapter closed. A new chapter is opening and is in its embryo stage.

G. A. Pauli, Colorado.

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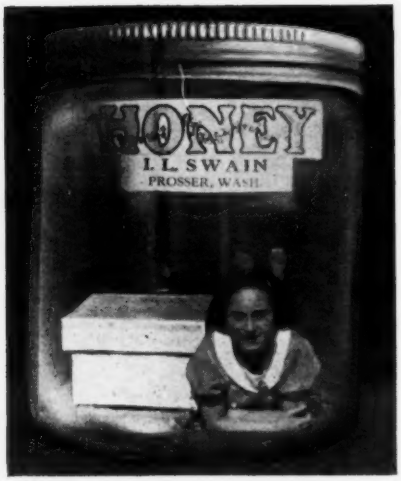
Bees in the Black Forest

This picture is from the Black Forest in Germany. Straw beehives you will see, square in shape, not like the old time skeps. These two hives were on the roof of a storage shed adjoining the home of a peasant, located in the Forest near Titisee. It seems to me as though it is a rather handy arrangement. One can just reach out of the window and get the honey. This picture was taken by Paul Wolf, who is in charge of the stocks of honey of the Straub Company.

W. F. Straub,
W. F. Straub & Company,
Chicago.

Inside a Jar



This picture of the girl and hive inside the honey jar is a trick, of course. I plan to use it on my honey labels. The girl is a honey fed product, as there is always honey on her table, the family using about 400 pounds a year. So, I believe you would say this is a sweet mess all the way around.

I. L. Swain,
Washington.

—ABJ—

Testing Queens

I read a lot in the bee journals about good queens and bad ones, so three or four years ago I decided to make a test and find out for myself who raised good and who raised bad ones. I picked out fifty queen breeders and wrote them that I was going to make a test of different queens from different breeders and that if they wanted to know just what their queens would do compared to others to send me two queens each and I would give each one a number and let each man know at the end of the season where his queen stood by number.

I did not let any breeder know the results obtained from others. Any breeder who wished to report the results of the test of his queens was privileged to do so.

I equalized a yard of bees, and got them all ready. There were breeders I think who thought I was trying to get queens for nothing and so they did not send any. Others, I think, were afraid their queens wouldn't hit the ball, and they didn't send any. But we did get a lot of queens. It would surprise you to know just how many poor queens there were. I can't figure it out unless they were damaged in the mail.

The outcome of it was that a few of the queens were way ahead of the others. My numbers 11, 21, 23, 32 and 40 were the leaders, with 38 and 12 tied for second place. The others were poorer than anything I had had in my yards previously. The stock from these selected queens are still doing well after two or three years.

In spite of all this I must say that I have never found anything that gets honey better than a yard of bees brought down from a breeder purchased twenty-three years ago and from which breeding has been made from the best honey getters every two years.

In conclusion, let me say I think queen breeders and shippers should ask an open season on postmasters and express agents who use fly spray when bees are in their care. I went into the post office one morning a year or two ago and heard a buzzing in my mail box. In the office the postmaster had a big fly spray, as big as a number ten shotgun, spraying flies. I only had a dozen queens in my mail box. What would you have said? Yes, I did too.

J. W. Powell,
New Mexico.

—ABJ—

Poor Bee Equipment

George Millington, of Vermont, sends us this picture and says, "I would suggest you call this 'Poor Bee Equipment.' The crooked combs were caused by too small a cover. The combs were about two inches deep."

This condition is often found when ill fitting equipment is used or when some careless management on the part of the beekeeping results in crowding the bees so they do not have sufficent storage room during the flow and have to pass above into empty equipment.

This may be on top of the colony or above escape boards or oilcloths with access through to deep covers or into empty super shells or otherwise unoccupied equipment placed on the colony for some other purpose to begin with.

It means a sticky, runny, messy job, cleaning up combs of bees and honey, always distasteful and more or less dangerous because of the chance of spreading disease, and in every case difficult to handle. It pays to have everything snug and tight.

—ABJ—

A Colorado Container

A colorful lithographed, key tin container, used by Rocky Mountain Honey Company, Salt Lake City, is boosting honey sales considerably, according to Otto S. Grow, manager. The can, made by the Western Can Company, of San Francisco, comes in 2½ lb., 5 lb. and 10 lb. sizes. It is bright red, with pink clover blooms and green leaves, and golden letters outlined in blue—one of the most harmoniously-blended cover shades shown in the Intermountain section.

"Buyers appreciate the sanitary-seal top and the easy manner in which the can is opened, merely twisting the key," points out Mr. Grow. "Business has shown a nearly ten per cent increase due to our new pack. In addition, the tins are more economical—they come already stamped which saves us a labeling process."

Fish like this cooked temptingly helps feed the crowd at the Wabash Round-Up.

Meetings and Events

Fourth Wabash Valley Round-Up September 10.

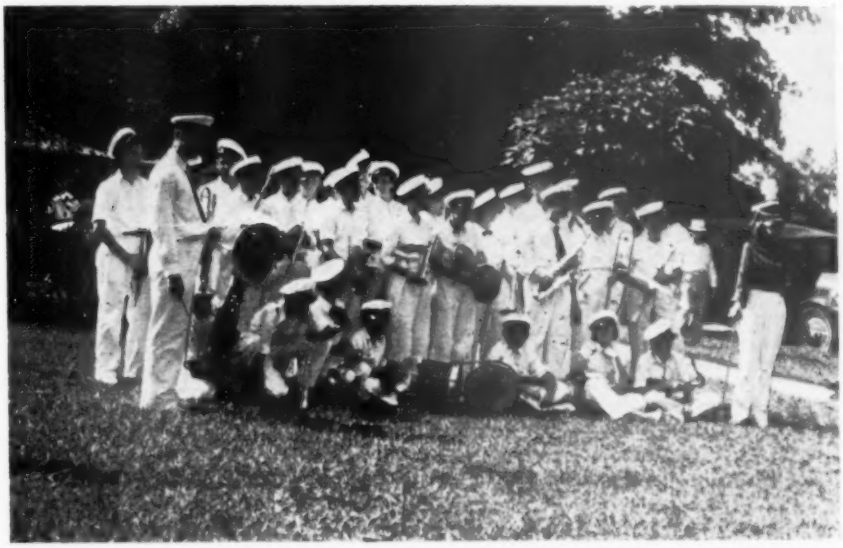
The full program of the Wabash Valley Round-Up at Newport, Indiana may be obtained by writing to L. R. Stewart, Round-Up host, at that address. We give here the main features. Date, Saturday, September 10.

The Wabash Round-Up, originated by L. R. Stewart, of Newport, has for four successive years been a drawing card for Indiana and Illinois beekeepers. Each year also the number of those to come from other states has increased until it has become one of the largest and most successful of the annual meetings.

Mr. Stewart is a likable host and goes to extremes to make everybody happy, find them good places in town to stay, provide plenty of food and entertainment. Those who come from a distance will feel like the trip has been a profitable one and that they have had one of those rare good times which a program of this kind gives each of those who attend.

This year the program will be devoted largely to contests, enjoyment and demonstrations rather than long discussions. There will be four short talks, "My Kingdom for a Queen," By G. H. Cale, of American Bee Journal; "Your Southern Queen," by A. L. Webb, of Alabama; "The Horse and Buggy Days of Beekeeping Are Gone Forever," by Jere Frazer, of Springfield, Ohio; and "Selling The Crop," by Prof. R. H. Kelty, of Michigan.

The contests will include a gadget contest; queen finding contest; hive nailing contest for women; honey, fruit and nut bread contest; a queen rearing demonstration by the Newport 4-H Bee Club; a question bee, lead by Inspector Starkey, Dr. Milum and Prof. Kelty; music and



Last year, these six cut-ups helped in the merriment at Newport. Left to right, Dr. V. G. Milum, A. G. Gill, Bert Woodman, Ken Hawkins, Homer Godwin and Roy Grout. (Don't bite your tongue off, Roy.)

Newport High School Band which provides music during the entire day of the Round-Up.

Southern Beekeeping States Federation, November 28-30.

Each month since April, brief information of interest on Charleston, South Carolina, has been given to you. In this city the 1938 convention of the Southern States Federation will be held November 28-30.

Begin to make your plans. You will have a chance to hear some of the outstanding authorities in this country, and the chance of a lifetime to rub shoulders with other beekeepers and swap ideas which may prove invaluable to you.

E. S. Prevost, Chairman,
Southern Beekeeping
States Federation.

entertainment, with a basket dinner at noon. Song Fest by the Vermillion County Home Economics Chorus; The pictures here show some of the crowds of previous years.

The Round-Up programs are all numbered and 5,000 of them will be distributed. On the day of the meeting, the number of your program will be dropped into a contest box from which later three numbers will be drawn. The first person will receive gasoline and oil for his round trip; the second, five gallons of Quaker State oil; and the third five gallons of gasoline.

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Officers of New Hampshire Association.

At the annual meeting of the New Hampshire Association, Durham, August 18, the following officers were elected: E. C. Wardwell, East Kingston, president; Elmer Stevens, Manchester, vice-president; J. R. Hepler, Durham, treasurer; Henry J. Holt, Manchester, secretary. This was one of the largest and best meetings since the beginning of the association. It was a three ring circus and everyone went home in good humor.

Henry J. Holt, Secretary.

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New Jersey Ships Queens Abroad.

The selection of queen bees from the finest apiaries in New Jersey for export to foreign countries and to other states was begun August 1, according to an announcement from the New Jersey State Department of Agriculture, some going as far as Europe, South America and to western Canada. New Jersey queens are in demand abroad and, being shipped from near the coast, they seem to withstand travel confinement.

New Jersey News Service, Inc.

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Massachusetts Summer Meeting.

The annual summer meeting of the Massachusetts Association was held at the Massachusets State College during Farm and Home Week, July 28. In his talk as principal speaker, Dr. E. F. Phillips, of Cornell University, indicated that the production of a good crop of honey depends not only on the care given bees during the active season but also on the care given them during the period of preparation. Lack of attention during one part of the preparation period cannot be overcome later.

Allen Latham, of Connecticut, described his method of queen rearing and the frames and mating boxes he uses. Other speakers, Secretary W. M. Copeland; A. C. Gould, chief apiary inspector, of New York; and Dr. B. N. Gates, chief apiary inspector, of Massachusetts.

Frank N. Shaw.

Pioneer Beekeepers Celebrate

Quite an interesting event took place recently at the home of Mr. and Mrs. Lewis, in New Westminster, when they celebrated the sixtieth anniversary of their wedding. Mrs. Lewis was born in the old Hudson's Bay Company stockade, in Victoria, in 1857, and Mr. Lewis came here from California in 1874.

They are real beekeeping pioneers, and as far as we have been able to find out were the first to keep bees on the coast of British Columbia, getting their first colony over forty years ago. They had a large orchard and the bees were brought in to help the fruit. Mr. Lewis was employed as a printer in Vancouver, and was able to get home only at week ends, so that much of the beekeeping had to be attended to by Mrs. Lewis. No supplies of any kind could be bought, but that did not present any difficulty, as Mr. Lewis was quite capable of making his own. Within the past few years he has made a china cabinet that would be a credit to a young cabinet maker.

One early experience nearly ended disastrously. The only time Mr. Lewis could look at the bees was on Sunday; they may have resented being disturbed on that day or may have preferred Mrs. Lewis' touch. In any case as soon as Mr. Lewis opened the hive, they boiled out and stung him severely around the neck. A Chinese servant called Mrs. Lewis, who pulled out the stings, cut open his shirt to keep him from choking, and sent for a doctor. The doctor had never seen anything like it before and didn't know what to do; but after several hours of unconsciousness Mr. Lewis gradually improved and in a few days was fully recovered. Since that time stings have not affected him.

The number of colonies was gradually increased to nearly one hundred and tons of honey were produced in

a district which is now too much built up to be of use for beekeeping. They still have a few hives, but since honey production ceased to be profitable, they have been selling package bees and queens. When the writer called at the Lewis home a few evenings, ago, Mr. Lewis was away at a lodge meeting; his wife says he spends most of his time studying history and bees. The picture shows the couple at a recent beekeepers' meeting; and although Mr. Lewis is well along in his eighty-ninth year, he enjoys good health, as does his wife. They will probably be beekeepers for some time yet.

J. P. Hodgson, British Columbia.

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Western New York Honey Producers

The Western New York Honey Producers Association held the annual summer picnic at Churchville Park, August 6, with President John Leonard, of Scottsville, presiding, and two hundred fifty beekeepers in attendance.

Howard Myers, of Ransomville; F. M. Babcock, of Fredonia and John De Muth, of Pembroke, discussing the price of honey, lead to the resolution that a 5-pound pail of No. 1 clover honey should be priced at 75 cents, and No. 2 mixed honey 50 to 65 cents.

According to Inspector Gould, of Albany, western New York had about the best crop of the year, but he expects that there is not so much but what the entire crop of the state will be sold readily before the succeeding season. An auction of materials donated by supply dealers and manufacturers resulted in a total of $26.00 for American Honey Institute. There was also a contest for the women and a balloon race for men, won by Roy Adams, of Altica.

The next picnic will be held in the northwestern part of the state.

G. E. Norris, Secretary.

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Rockland and Bergen Counties (New York)

The newly formed Rockland and Bergen Associations held a field meeting at H. A. Hansen's, Pearl River, Sunday, July 24. An interesting feature of this program was the distribution of samples of different kinds of honey served on tasty, toasted, muffins with thirst-quenching punch, all prepared by Mrs. Hansen. Mr. Hansen gave an interesting demonstration of going through the apiary, selecting colonies and discussing important facts to the beekeepers.

The executive committee was gratified by the large number requesting membership cards. The new association promises to afford many happy hours to those who have become devoted to beekeeping.

3,811?

Turn to page 407 for the answer

Whether or not the Institute continues this type of Honey Publicity depends upon the support of our beekeepers during September, October, November and December.

This is the time when surplus must be laid by to carry the Institute over the lean months.

$2,000.00

Is the amount needed in the Reserve Fund by January first for the building of the 1939 budget.

●

Help Build American Beekeeping!

●

Send in Your Institute Membership NOW!

$1.00 per ton or 3c per case

AMERICAN HONEY INSTITUTE,
Madison, Wisconsin,

Enclosed find my membership of $_____.

Name _____

Street or Rural Route _____

City _____ State _____

Crop and Market Report

Compiled by M. G. Dadant

For our Crop and Market Report, we asked a number of questions which are summarized in the accompanying table with suggested prices.

Crop Compared to 1937.

There is no doubt but that the crop this year is going to be larger than in 1937. Larger for the United States and at least the equal in Canada, if not larger.

California, however, has an extremely short crop perhaps not much over one-half of last year. In addition, the New England states are short and the entire Atlantic coast, save the southern part of Georgia, have also had an extremely short crop.

The heavy crop this year appears to be in the Central West which has been short for a number of years. This is fortunately so because this is the very section in which the producers are enabled to increase their volume of sales greatly and thus prevent a stagnation in the larger markets. In fact we see a tendency on the part of producers, even those who have harvested as much as a carload of honey to hold and gradually distribute their product through local channels, rather than sell to the larger buyer.

Colony averages, our readers will see by the attached table, are very high in the sections indicated and especially high compared to the poor seasons we have had for the past several years. This does not apply, however, to Utah, Nevada, California and some parts of the West where the per colony average will hardly be any more than last year.

The writer does anticipate that the volume of honey this year may run 15 per cent more than a year ago. On the other hand, it is extremely white honey with a very little amount of amber so that its readiness of sale will not be compared to the mediocre product which even the white honey districts were able to furnish in 1937.

Prospects.

The season is waning rapidly and many sections in the sweet clover regions which had anticipated an extremely heavy flow during the latter part of the season, have been disappointed.

In addition, the fall flow region undoubtedly will have much less than a year ago with prospects very short. This has been caused both by the possibility of clean-cultivation of crops this year and by lack of rainfall in many sections when the heartsease and Spanish-needle were making their growth.

Prices.

I have tried to arrange in the accompanying table, a suggestion of prices for the producer. We call attention to the fact that these can only be suggested prices, a combination of prices at which honey is being offered on the market today, prices suggested by the producer himself, as well as the general opinion of the writer.

Occasionally one of our subscribers writes in complaining that prices as suggested in the table will not sell his honey or else that the prices suggested are too low and do not yield a profit. All we can do is try to suggest a medial line along which the producer can use his own judgment as to the prices he will accept for the crop. The conservative person will hold his crop and watch the markets carefully whereas the anxious spender will want to sell even at low prices and get the money.

One thing we would like to emphasize in this page is the attitude of the large buyer and packer as to honey prices. Too many times the packer and buyer is blamed for depression in honey prices. It is reasonable, however, to expect that the honey buyer will be happy over a fair stabilized price. The difficulty arises when one producer sells to a buyer at an extremely low price. Then ten others do it and the result of the action means a depressed price offer on the part of the buyers. After all, the honey packer is in business for a profit and he will have to buy his honey at just as low a price as the other packer, his competitor, or else suffer as a consequence.

When carloads of honey are bringing 7 cents a pound, the jobbing price on two dozen 16-ounce jars must necessarily be higher than when it brings only 5½ or 6 cents. This means that the packer is making an additional profit on each case of honey he sells. Naturally, the higher he can sell the honey the more his profit in dollars and cents even though his percentage remains the same.

Just now there does seem to be a lot of indecision on the part of the buyers and honey prices do seem to be depressed over what good white honey is worth. We believe that the general offers going around are 5 cents and cans furnished f. o. b. the producer's station. To many, this will look like an extremely low price and to the writer it does look like lower than justified by the crop and by the possibilities for its sale.

We must remember that many sections of the country are short of honey this year. In addition, prospects for increased employment, better business conditions, etc. are favorable if we are to believe the economic prognosticators who are offering us advice.

In addition, the British Isles which are our main foreign customers for honey, have had almost a failure this year and in addition, the New Zealand crop last winter and spring was extremely small. This offers a desirable outlet for considerable more money than a year ago even though the Canadian crop may be a little larger and may demand its larger share of the British market.

All in all, we see no reason why honey prices should not stabilize just a little bit below last year and we personally look for a slow market perhaps until most of September is over and then a stabilization and likely a gradually rising market in a jobbing way at least until the holiday season.

After all, honey of the quality that we have produced this year is just about as good property as money in the bank.

The writer can recall in years gone by when we packed our white clover honey in barrels and when the market was somewhat depressed, held our clover honey over for two or three years if necessary until we got that price of 8 cents which then was a standard price with us.

We seem to have gotten somewhat out of the habit of holding honey over the good crop years for the poor ones.

We shall be glad to have suggestions from readers as to any changes in the table which is by no means invincible and perhaps in many cases unsatisfactory.

SUGGESTED PRICES F. O. B. SHIPPING POINT	Crop Compared to 1937	Colony Average	Prospects Balance Season	Honey Selling Retail	Honey Selling Jobbing	Buyers?	Offers on White Extrac'd	C/L White Extracted	C/L Amber Extracted	C/L No. 1 Comb	10-lb. Retail Extracted	5-lb. Retail Extracted	10-lb. Bulk Comb	5-lb. Bulk Comb	1-lb. Jar Retail	Comb Section Retail	Comb-Case to Grocer	Cut Comb lb.	Discount to Grocer	Discount to Jobber
NEW ENGLAND	80%	50%	Fair	Fair				7	6		1.40	.75			.25	.25	4.50		20%	5%
NEW YORK	100%	75%		Fair				7	6	3.60	1.30	.70			.20	.20	4.25			
NEW JERSEY, DELAWARE, MARYLAND	50%	30%		Slow							1.40	.75								
WEST VIRGINIA	25%	15%						7	5½	3.00	1.40	.75	1.60	.85	.25	.20	3.80	.25		
NORTH CAROLINA, SOUTH CAROLINA	40%	25%	Poor	Fair									1.40	.75	.25					
GEORGIA	90%	60%	Fair	Fair	Fair			6	5		1.25	.65	1.50	.75	.20	.15		.15	20%	10%
FLORIDA	80%	60%	Good	Fair	Fair		5-6	6	5		1.00	.60							20%	10%
ALABAMA, MISSISSIPPI	100%	25%	Good	Fair	Fair			6½	6	3.25	1.25	.65	1.50	.75	.20	.20	3.75	.20	20%	10%
KENTUCKY, TENNESSEE	100%	40%	Fair	Good	Fair						1.45	.75	1.80	.90	.20	.20	3.60	.18	20%	10%
ARKANSAS, LOUISIANA	120%	70%	Fair	Good	Fair			6			1.20	.65	1.30	.70	.20	.20			10%	10%
TEXAS	75%	60%	Fair	Fair	Poor		5-5⅛	5¼	4½		1.00	.60	1.20	.65	.20				10%	15%
NEW MEXICO, ARIZONA	100%	90%	Fair	Fair	Fair						1.00	.55	1.25	.65	.20	.20			20%	
PENNSYLVANIA, OHIO	200%	120%	Good	Slow	Slow		5	7	6	3.00	1.20	.65			.20	.20			20%	10%
MICHIGAN	150%	130%	Good	Slow	Slow		5	6-6½	5½	2.50	1.10	.55			.20	.20			17%	5%
WISCONSIN	110%	100%	Poor	Slow	Fair			6-8	5-7		1.15	.60			.20	.20	4.00		20%	5%
MINNESOTA	100%	120%	Fair	Slow	Slow		5	6	5½	3.00	1.00	.55			.20	.20			20%	10%
INDIANA	250%	125%	Good	Fair			5½	6½	5½		1.20	.65	1.40	.75	.20	.20	3.60		20%	10%
ILLINOIS, IOWA, MISSOURI	200%	130%	Fair	Fair	Slow		5	6½	5½		1.25	.65	1.40	.75	.20	.20	3.60		20%	5%
NORTH DAKOTA, SOUTH DAKOTA	90%	80%	Poor	Fair			5	6	5		1.10	.60			.20	.20	4.00		15%	10%
NEBRASKA	90%	60%	Poor	Fair			5	7	6		1.00	.60			.20	.20	3.50		20%	10%
KANSAS, OKLAHOMA	80%	50%	Good	Slow			5	6½			1.00	.55							20%	10%
WYOMING, COLORADO	100%	80%	Good	Fair			5	6	5		.90	.50	1.00	.60			3.50		12%	8%
MONTANA	100%	120%	Fair	Fair			5	6¼			1.00	.50			.20					
IDAHO	120%	70%	Fair	Fair			5½				.95	.50								
UTAH, NEVADA	90%	60%		Fair			5	6												
WASHINGTON, OREGON	100%	60%					5	6½			1.10	.60								
CALIFORNIA	45%	40%	Poor	Fair			4½	5½	4½		1.00	.55			.15	.15				
BRITISH COLUMBIA	120%	70%	Good	Fair				9			1.75	.90								
ONTARIO and QUEBEC	100%	70%		Fair				7½			1.40	.70								
SASKATCHEWAN and ALBERTA	100%	80%		Fair			7	8½												
MANITOBA	100%	100%		Fair			7-7½	8½-9												

The BEEKEEPER'S EXCHANGE

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers, we require reference of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease, or state exact condition, or furnish certificate of inspection from authorized inspector. Conditions should be stated to insure that buyer is fully informed.

BEES AND QUEENS

"DIEMERS" Leather Colored Italian Queens fifty cents each. Discount on large orders. Diemer Bee Co., Liberty, Mo.

MOUNTAIN GRAY CAUCASIAN QUEENS September, October delivery. Untested, 50 cents each. 15% discount to dealers. Prompt shipment. Tillery Brothers, R. 4, Box 132, Greenville, Ala.

NORTHERN ITALIAN QUEEN BEES. Personally reared, 3-banded. If it is quality you want then try our strain of bees and queens. They are not excelled. Price 50c. Write for prices in large quantities. N. J. Smith, Coopersville, Mich.

FOR STRONGER COLONIES, Bigger Honey Crops and Gentler Bees try our prolific, well bred, three banded Italian queens. They are used and endorsed by many leading beekeepers of the U. S. and Canada. Now until November, select young laying queens 50c each. Prompt deliveries. No disease. H. C. Short, Fitzpatrick, Ala.

NORTHERN BRED Italian Queens, hardy stock, good workers. 75c each—lots of 5, 70c each. A. G. Woodman Co., Grand Rapids, Michigan.

REAL PETS—Brown's Stingless Bees. Good honey gatherers, non-swarmers. Season's price $1 a queen; over 10, 90c each. Brown's Apiary, Cape May Court House, N. J.

GOLDEN ITALIAN QUEENS that produce workers very gentle to handle, good honey gatherers. Health certificate. Satisfaction guaranteed. Select tested $1.50; tested $1.00; untested 50c. D. T. Gaster, Rt. 2, Randleman, N. C.

LONG-TONGUED Caucasian Bees and Queens. Gentle, prolific, hardy. Better honey gatherers, winter better. Queens 50c each. 15% discount to dealers. P. B. Skinner Bee Co., Greenville, Ala.

GOLDEN QUEENS, excellent quality that produce hardy, gentle workers, personally reared. Untested 50c; tested $1.00. Health certificate. Satisfaction guaranteed. O. E. Brown, Route 1, Asheboro, N. C.

FOR A GOOD HONEY CROP try our Three-Banded Italians. Alamance Bee Company, Graham, N. C.

GOLDEN ITALIAN QUEENS of fine quality. Select untested 50c each. Carolina Bee Farm, W. O. Curtis, Mgr., Graham, N. C.

MILLER BROTHERS, Three Rivers, Texas. Only exclusive Caucasian breeders west of the Mississippi. Packages with queens introduced.

EXTRA YELLOW Italian Queens that produce bees a little more yellow than three-banded; more gentle and just as good workers. Untested 50c each; tested $1.00. Health certificate and satisfaction. Hazel V. Bonkemeyer, Randleman, N. C., Route 2.

HONEY FOR SALE

FOR SALE—Delicious water-white sweet clover honey in 60-lb. cans. Any quantity. M. W. Thompson, Toronto, S. Dak.

FINELY FLAVORED white clover extracted 7½c or 7c ten case lots. Buckwheat in cans or kegs 6c. A. J. Wilson, Hammond, N. Y.

NEVADA ALFALFA SWEET CLOVER HONEY. C. E. Andrews, Fallon, Nevada.

HOWDY'S HONEY—White, clover extracted in new sixties by can or carload. Also some amber, mixed extracted and white, clover Honey Hunks. Howard Potter, Ithaca, Michigan.

FANCY CLOVER HONEY in 60 lb. cans. Send for sample and price. A. A. French & Son, Theresa, N. Y.

HONEY FOR SALE—We buy and sell all kinds, carloads and less. The John G. Paton Company Inc. 630 Fifth Avenue, New York, N. Y.

CHOICE NEW CLOVER HONEY in 60's and in 5 and 10 lb. pails. R. C. Bish, successor to Moore Apiaries, Tiffin, Ohio.

NEW CROP extracted honey, car and ton lots. Russell Smalley, Rippey, Iowa.

FOR SALE—Fancy Iowa white clover extracted honey. Kalona Honey Co., Kalona, Iowa.

CLOVER HONEY FOR SALE. Write for prices. Henry Price, Elizabeth, Ill.

WHITE CLOVER—choicest of all honey. Samples free. Henry Stewart, Prophetstown, Illinois.

FOR SALE—New crop fine clover honey in 5-gallon (60 pound) cans. One can to tons, as you desire. Also 5 and 10 pound pails chunk comb honey. Sample free for the asking. W. S. Earls, New Canton, Ill.

FINEST WHITE CLOVER HONEY in 60 and 5 lb. pails. Sample 15c. Prices on request. F. W. Summerfield, Grand Rapids, Ohio.

ORANGE, Palmetto and Mangrove honey in new sixties. Peter W. Sowinski, Fort Pierce, Florida.

WE BUY AND SELL ALL KINDS COMB AND EXTRACTED, CARLOADS AND LESS. H. BLITZ, P. O. BOX 3452, PHILADELPHIA, PA.

FANCY TUPELO and Light Amber Honey for sale. Barrels and 60's. Marks Tupelo Honey Co., Apalachicola, Fla.

FOR SALE—Northern white extracted and comb honey. M. W. Cousineau, Moorhead. Minn.

CHOICE Michigan Clover Honey. New 60's. David Running, Filion, Michigan.

HONEY FOR SALE—All kinds, any quantity. H. & S. Honey and Wax Company, Inc., 265-267 Greenwich Street, New York.

HONEY PACKERS—Write us for prices on carload lots of California and Western Honeys. We stock all varieties. HAMILTON & COMPANY, 108 West Sixth St., Los Angeles, California.

FOR SALE—Fancy, well ripened, white sweet clover honey in 60-lb. cans. Extra good quality. Dadant & Sons, Hamilton, Ill.

1938 CROP, nice well ripened Heavy Body Clover Honey 7 cents lb. 60 lb. cans only. Sample 10c. M. Noack, 3958 Polk Street, Chicago, Illinois.

FOR SALE—Fancy Comb, and No. 1 comb cellophaned or cartons, $4.00 and $3.50 per case, in six case lots. White Extracted. Quantity lots, 7½c. N. B. Querin & Son, Bellevue, Ohio.

FOR SALE—Honey by the carload. Imperial Valley Beekeepers Association, 847 Heber Avenue, Calexico, California.

NEW CROP ripened Extra white clover extracted in 60's 7½c. No. 1 white comb per case $3.50. No. 2, $2.75. F. J. Smith, Castalia, Ohio.

CLOVER in new 60's, 8c; amber 6½c. E. S. Miller, Valparaiso, Indiana.

COMB No. 1, to fancy weight $3.50 per case. Nice clover extracted in 60's, 7½. For price in fifty case or can lots write, H. G. Quirin, Bellevue, Ohio.

WHITE CLOVER or raspberry-basswood honey 5-lb. pails $6.50 per dozen, 60-lb. tin $5.00. F. L. Barber, Lowville, N. Y.

HONEY AND BEESWAX WANTED

CASH PAID FOR CARS AND LESS THAN CARLOADS comb and extracted honey. Mail samples and best price C. W. Aeppler, Oconomowoc, Wisconsin.

WANTED TO BUY: Comb and extracted honey. JOHN HARNACK & SON, McGREGOR, IOWA.

WANTED—Carlots honey; also beeswax, any quantity. Mail samples, state quantity and price. Bryant & Cookinham, Inc., Los Angeles, California.

WANTED—Comb, chunk comb, white and light amber extracted honey. Any amount Central Ohio Apiaries, Millersport, Ohio.

WANTED—White and Amber Extracted Honey, any quantity; also beeswax. Write THE FRED W. MUTH CO., Pearl and Walnut Sts., Cincinnati, Ohio.

FOR SALE

NEW 2 FRAME reversible extractors at the price of used machines. Welded construction, cannot be beat, free literature. Walter T. Kelley Co., Paducah, Ky.

FOR SALE—Brand Capping Melter, used very little. $15.00 off list price. J. E. Wing, Cottonwood, Calif.

100 EMPTY BEEHIVES with full depth supers and equipment. Reasonable. Disease free. N. R. Needham, Box 247, Carlton, Minn.

65 CASES 60-lb. noney cans, perfect, both cans and cases used once. 50c per case of two cans. J. K. Woolevich, 6315 So. Damen Ave., Chicago, Ill.

FOR SALE: 500 stands of bees, 1375 hives and supers, 8-frame extractor and whole outfit. Over 300 supers of honey sell with the bees. State inspected. Kuster, Wheatland, Wyoming.

POLLEN FOR SALE: Pollen in standard frames. Certificate of inspection furnished. Write Cloverland Apiaries, Roseau, Minn.

HUNDRED SIXTY HIVES BEES in West Texas, or would consider selling half interest to man who would run and increase. Room for thousand hives. J. W. Powell, Mesilla Park, N. Mexico.

FOR SALE—Two large double jacketed honey dispensing tanks, 2 preheating tanks, all with burners. Bargain. Acme Products Co., Sedalia, Mo.

WANTED

YOUNG MAN with universal beekeeping experience, honey production, queen-rearing, etc., desires position as manager. Had experience with 2000-3000 colonies in the clover belt and the deep South. Intelligent and efficient. Write to American Bee Journal.

SUPPLIES

YOUR WAX WORKED into medium brood foundation 15c pound; thin super 22c. Fred Peterson, Alden, Iowa.

WRITE FOR CATALOGUE. Quality bee supplies at factory store prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Onsted, Michigan.

PORTER BEE ESCAPES save honey, money, avoid stings; faster, most efficient. R. & E. C. Porter, Lewistown, Ill.

ATTRACTIVE PRICES on bee supplies and comb foundation. Send for catalog. Saves you money. THE FRED W. MUTH CO., Pearl and Walnut Sts., Cincinnati, Ohio.

FOR SALE—Queen mailing cages. Material, workmanship and service all guaranteed. Write for quantity prices.
Hamilton Bee Supply Co., Almont, Mich.

$11.00 is our price for working 100 pounds of your wax into medium brood. Our large modern bee hive factory is manned by experienced workers milling thousands of pounds of comb foundation and hundreds of thousands of board feet of lumber into beehives annually. Quality at Low Cost is our motto. Free catalogue. Free shipping tags for your wax. The Walter T. Kelley Co., Paducah, Kentucky.

DIFFERENT, that's all. Written and published for the instruction of beekeepers. 52 pages of breezy entertaining beekeeping comment each month. One year, $1.00; two years, $1.50. Sample, 3c stamp.
The Beekeepers Item, San Antonio, Texas.

MISCELLANEOUS

BEST BEE HUNTING OUTFIT. Grover, Bristol, Vermont.

LABELS—NEW DESIGNS. ALSO SHIPPING TAGS. Samples free. Thoughtgift, 50 Presque, Rochester, New York.

PLANS FOR POULTRY HOUSES — All styles; 150 illustrations. Tells you the type to build for your particular locality. Secret of getting winter eggs, and copy of "Inland." Send 25c.
Inland Poultry Journal, Spencer, Indiana.

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, 10/6. The Apis Club, The Way's End, Foxton, Royston, Herts, England.

CARTONS for Cut Comb Honey. New attractive designs with your name and address. Low prices. Fast service. Samples on request. May Carton Co., Box 257, Traverse City, Mich.

BEEGONE Takes Off Honey. Pint sample 40c prepaid. Honey House, Adrian, Mich.

Erratic Weather

Distribution of rainfall in the midwest this season has been unusually erratic. Weather reports in Iowa indicate a rainfall of as high as twelve inches during the month of July in some localities while others not far distant had less than one inch. In the one case there was an excess of moisture while in the other crops suffered for lack of rain. Just why this great difference within a short distance is very hard to understand.

The Postscript

Gossip About the Office in the Making of the Magazine

J. B. Douglas, of Bonita, Arizona, writes that after sixty-five years with the bees he is out of the business, with only three colonies to pass away the time. It is interesting to note that he still wants a few bees to keep him company. Once one gets seriously interested in bees, he does not let go easily.

———ABJ———

Earl Price, of Calhoun, Missouri, sends a specimen of partridge pea, or sensitive pea, with the note that bees seem to like it better than clover in his locality and the question as to what honey he may expect from this source.

The yellow flowers of the partridge pea are a familiar sight on poor, dry lands or along sandy roadsides over a wide area. Good reports of honey from this plant come from Missouri and other southeastern localities. Some beekeepers tell of yields of twenty to thirty pounds a colony from it.

———ABJ———

Specimens of yellow ground wasps have come to me for identification. They are slightly larger than honeybees and very active. They seem especially common this year, a dozen or more being seen together about their nesting place. The insect is **Bembex spinolae,** a solitary wasp which digs a shallow hole in the ground in which to lay its eggs. It provisions its nest with flies to serve as food for the young.

Because of their habit of catching flies these wasps may be regarded as beneficial insects.

———ABJ———

From Frank Beach, Jr., we learn that Mr. Ulrich, of Filer, Idaho, is getting honey from Austrian winter field peas. The bees are reported to be working heavily and getting both honey and pollen. The honey is water white, similar to that gathered from alfalfa and sweet clover, both of which are available in the same locality.

Since few reports of honey from field peas are available, we should like very much to hear from other beekeepers who know of similar cases. We want to know something about the quantity and quality of the honey and how in general, the bees gather honey from field peas.

———ABJ———

In the July Postscript we reported the case of Edward Wirth, who lives on Long Island and gets his honey from locust, ivy and charlock. Later reports tell a different story, for this year the bees ignore the plants on which they usually work and visit those which are not attractive to them most seasons. Wirth writes: "I am getting clover honey—something I never got before—and the limas (beans), of all things, are yielding heavily."

The beekeeper can never be sure of anything, for a change in the weather or in some other condition may cause a different story to be told. The bees may ignore a large acreage of some special kind of plants for years and then suddenly gather a big honey crop from it.

Next year Mr. Wirth's bees will likely go back to the locust, poison ivy, and charlock again. He refers to wild mustard as charlock, not wild radish as we assumed.

———ABJ———

D. W. Taylor, of Waldron, Virginia, calls attention to the fact that the seeds of black locust are often infested with beetles which prevent germination. In some localities it is hard to grow these trees since, even though the seeds grow, they are subject to injury by borers which work within the body of the tree and check their growth or kill them.

In the May Postscript it was asked whether or not sugar beets yield honey when the flowers are permitted to mature seed. From Edward Kellner, of Czechoslovakia, comes word that, having visited a plot of sugar beets in full bloom, he was unable to find a single honeybee on the blossoms. During several years of such observation he found it always the same.

———ABJ———

Kellner also supplies addresses of men who may be able to supply stingless bees of the tropics as requested in the June Postscript. He gives the addresses of two beekeepers: Mr. Cruz Rojas, San Jose, Costa Rico, and Mr. Alof Sandweg, estacion Jesus Maria, F. C. Nacional, Costa Rico. Anyone interested in importing the stingless bees should remember that they can only be obtained by special permission of the Bureau of Entomology, Washington, D. C.

———ABJ———

The bird's-foot trefoil, which Professor Johnston-Wallace recommends to New York farmers as a pasture plant, appears to be very drought-resisting. It is low growing and shows not the slightest injury in our test plot from very dry weather. It is disappointing to us because the bees show so little interest in it. Perhaps under other conditions it may prove to be a honey plant. Such small plots offer a poor test of the value of plants for bees. Reports from England indicate that samples of white clover honey in that country usually show pollen from the trefoil.

———ABJ———

Although spring opened with plenty of rain we have again suffered from drought for several weeks this summer. This was owing in part to reserve subsoil moisture having been depleted by the long drought of preceding years. The season has provided a very good test of the drought-resisting plants in the test plots.

We have been unable to help a number of correspondents who have written us to learn where they could buy seed of the sainfoin, or esparcette, which is valued highly in Europe for both forage and bee pasture. Now we learn that the Europe-American Import Company, 132 Beeman Street, New York, has recently imported some of this seed from Hungary. We hope to try some of it in our test plots to find out whether it is suited to our conditions.

———ABJ———

A correspondent who is familiar with sainfoin writes me that there is a strain which will stand much more cold and much more drought than the common strains of Europe and at the same time produce more hay. Since so many tests of sainfoin in this country have proved disappointing it is important that the hardiest possible strain be secured. We have favorable reports of the plant from the mild climate of British Columbia, but all midwest trials have failed as far as we are able to learn.

———ABJ———

An Atlantic, Iowa, woman who has suffered severely from hay fever has great confidence in honey as means of relief. There has been so much comment on her case that there is frequent inquiry for honey by others who wish to try this very pleasant remedy. Her experience with this treatment has extended over several years and she reports that when she is able to secure honey produced in the neighborhood at the season when hay fever is troublesome, she is promptly relieved.

FRANK C. PELLETT.